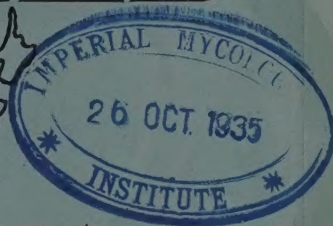


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SEPTEMBER 5th, 1935

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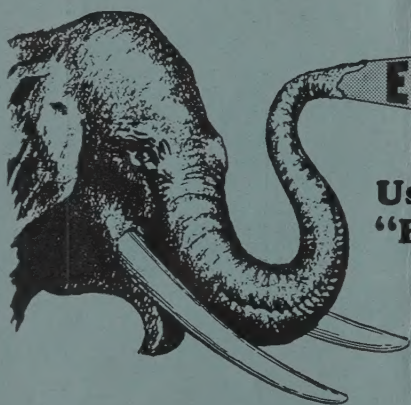
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EDITORIAL.

Organizing the Fruit Industry.

THERE IS APPARENTLY no royal road to the organisation of the fruit industry,—or any industry. The discussions among growers in the several States on the subject of marketing legislation reveal the widest possible differences amongst producers themselves.

In the first place it is obviously useless to speak in general terms about the "fruit" industry, for the several sections have their own individual problems. This is realised by Victorian growers, who are earnestly endeavouring to have the several sections of the "fruit" industry defined in the Bill now before Parliament.

Again, in N.S.W., the Bill which was sought to be enacted by the N.S.W. Fruitgrowers' Federation—but which the Cabinet has declined to introduce—the same feature was recognised, i.e., the grouping of the producers according to the particular fruits grown.

In Victoria the industry is already organised in groups,—some for dealing with policy matters, others for bulk loading, market regulation, and trading.

All growers, however, are insistent unanimously on certain major points, i.e., the need for increased horticultural research, for the application of scientific methods of culture, the cleaning up or destruction of neglected orchards which are breeding grounds for pests, and the tightening of regulations in respect to the marketing of low-grade fruit in both the city and the country.

Despite marked differences of opinion in N.S.W. on the subject of legislation credit must be given to all who are seeking for methods to improve the industry.

"De choc des opinions jaillit la verite." (Truth arises from a conflict of opinions) says the French proverb.

Now that it is definite that the N.S.W. Government will not introduce the Fruit Marketing Organisation Act the opportunity is open for the grouping of growers in the sections indicated in the Bill, seeing that growers are contributing funds for organising by means of the orchard tax. Thus each section could deal intensively with its own problems. This could speedily lead to the organisation of co-operative enterprises on commercial lines to reduce costs and bring about more efficiency in marketing.

In Western Australia major success has been achieved in marketing Apples and Pears by a voluntary sys-

tem of market regulation based on accurate knowledge of crops and market requirements. In this connection the success of co-operation between the growers and the trade has been most marked. An advertising campaign—conducted on a most modest scale—was successful in lifting fruit consumption.

The advertising of fruit on educational lines has not so far been tackled seriously in Australia. There is a wide open door for constructive work in this connection.

In the discussions on fruit marketing recently one grower pertinently pointed out that one of the basic reasons for depression in the industry was not the price received for the fruit, but the heavily increased costs of production. He quoted instances where costs of equipment had increased by 200 and 300 per cent.

The development of the pure fruit drink trade—which has large possibilities—is being left to private enterprise. If ever there was an opportunity for effective co-operation among growers surely this was outstanding! Fruit has been going to waste, yet with effective business organisation, this is being turned into profit, and with the expenditure of quite modest capital.

:: :: :: ::

On matters of social reform and social justice primary producers throughout the world may yet provide the required leadership for the ushering in of better conditions. Not only in Australia, but in most other countries the primary producers are having a bad time. Here again the opinions of producers are widely divergent. Some see in the present crisis the overthrow of the Capitalistic system and the introduction of a just and equitable social order under a system of national planning. Dr. Kagawa, the Japanese philosopher and social reformer—a world figure—pins his faith to co-operation among producers and consumers, plus an economic League of Nations. Russia has adopted Lenin's interpretation of the Marxian philosophy: now of the 165,000,000 none are out of work, and, according to independent observation—the Institute of Pacific Relations—the system has come to stay, and there is a steady rise in the conditions of the people.

In the United States of America—once a nation of individuals and private enterprise—the Rooseveltian system of national planning is in process of being tried and tested. The "totalitarian State" is the objective of Nazi Germany and Fascist Italy.

Reafforestation Problems.

AMONG THE MANY matters which receive the attention of far-seeing fruit producers, the question of reafforestation looms largely.

Now and again public attention is directed to the need for an awakened forestry conscience. Fruitgrowers, in common with other primary producers, realise only too well the necessity for the continued planting of softwood and hardwood trees to provide for their ever-expanding need for boxes and tools of trade.

Floods and erosion reveal in all their severity the evil results of denuding the country side of trees.

Reafforestation is necessary to maintain the efficiency of our forests from a timber-getting point of view for future generations, also to arrest soil erosion.

What a sorry lesson U.S.A. has had to learn in this connection. The cables have just told us of 59,000,000 acres of good land, definitely and finally lost to the United States because of erosion by flood and wind. Then there are an additional 105,000,000 acres with the top soil practically ruined, and the query is whether this vast area can ever be used for cultivation again.

Yet Australia is apparently following the same tragic pathway. Those who have seen the huge sand drifts in the Victorian Mallee country realise the danger of the situation. Vast areas have been denuded of their native vegetation.

Originally provision was made for shelter belts, but owing to insistent pressure from settlers for more land, these provisions were not enforced. Now Mallee dust is blown hundreds of miles out at sea. The need is great for growing plants which bind the soil and for the planting of wind-breaks and shelter belts.

Meanwhile, in all parts of the State, the sound of the woodman's axe is heard and what provision is being made for replanting? The recent floods in Gippsland and elsewhere tell their own story.

:: :: ::

The Forestry Commission is alive to these dangers, but an aroused public conscience is necessary. The Tree Planters' Association is performing good service and it would be well if their activities could be multiplied a hundredfold. Among other things the Tree Planters' Association has been instrumental in establishing a National Arboretum at Kalorama, in the Dandenong Ranges, where forest and other trees from all parts of the world are being grown for scientific and observational purposes.

:: :: ::

While many matters of immediate concern necessarily engage the attention of fruit growers, the long range subject of reafforestation must ever be kept in view, and the authorities may be assured that any lead they give in this connection will have the wholehearted support of fruit producers.

Turkey, about which we hear too little, is achieving success in her endeavors to improve conditions for all on a nationally planned scale. Even Great Britain has forsaken her attitude of laissez faire and has national planning as an objective. And now Alberta in Canada is going to give the Douglas Credit system a trial!

Dean Inge, late of St. Paul's, London, a clear thinker and a far-seeing man (and not so gloomy as some imagine), sees opportunities in Australia and elsewhere for collective and self-contained farming—probably along the lines being successfully operated in Fontana, California.

We are living in a rapidly changing world—we are living in a new world, but the fact is not as yet recognised.

There is one outstanding fact which should be shouted from the housetops—

For the first time in the world's history there is ample for the mate-

rial needs of all the dwellers on this planet.

There is no need for poverty, destitution, unemployment and all the ills from which a weary world is suffering.

How long must it be before the nations of the world recognise this and learn to dwell together in peace. The golden age is here if we but knew it,—with time for all for self expression, art, beauty, culture, and all that is worth while in a full-rounded experience.

Much could be written on this subject, and it has many facets. We invite correspondence from readers,—both as regards the immediate and pressing needs of the moment, and that wider outlook, which after all, is not visionary but is real and practical.

And it will be the primary producers who have the final say. Why not have the first say, and give the leadership for which a weary world is waiting?

THE AGRICULTURAL COUNCIL.

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SEVERAL ENQUIRIES have been received from readers regarding the Agricultural Council. What is the constitution of this body, and what are its functions? Are producers effectively represented? These enquiries have been prompted by recent press statements regarding matters of a contentious political nature with which the name of the Council of Agriculture has been associated.

The Agricultural Council appears to be constituted of the State Ministers of Agriculture, their senior officers and advisers.

We do not know of any producers' organisations having representation on this council.

The functions of the Agricultural Council are appreciated in so far as they deal with matters of research, improved yields, pest control, uniformity of inspection and the like. Even with regard to these matters the Agricultural Council would doubtless find its hands strengthened if it had effective contact with established and representative producers' organisations.

But it must be admitted that many producers' organisations are uneasy when it is known that political and legislative matters are under discussion without reference to producers.

Already the Australian Dairy Produce organisations have expressed disapproval of the activities of the Agricultural Council, particularly as the council appears to be an intermediary between the producers' organisations and the Government.

Fruitgrowers' organisations in the several States have expressed surprise at the press announcements apparently emanating from the Agricultural Council, which deal with political and legislative matters, and about which these growers' associations were not consulted.

While appreciation is expressed for the activity of the Agricultural Council in organising a Commonwealth Codlin Moth Committee, growers' associations have expressed regret at the absence so far of producers' representatives.

The remedy appears to be a simple one, namely, for producers' organisations to be consulted on matters of far-reaching policy.

MR. J. B. MILLS IN LONDON.

Interesting Comments.

Australian Apple and Pear growers will await with interest the return from London of Mr. J. B. Mills, president of the Australian Apple and Pear Export Council.

So far, press reports are available of interviews with Mr. Mills in London. Among the subjects so far reported have been the following:—

- (a) The failure of the English Apple crop owing to unseasonable weather.
- (b) Expressing the hope that to give Australia a clear market in U.K. for Apples, the British Government would impose a duty of 7/- per cwt.. on foreign Apples in place of the present duty of 4/6 per cwt.
- (c) The greater use of Southampton as a port of destination for Australian fruit, — from whence supplies could be speeded up to London.
- (d) The value of iodine wraps for export fruit.

**"FRUIT WORLD" APPRECIATED
IN ENGLAND.**

The Editor,—
Sir,—I find the "Fruit World" of great value and appreciate reading the difficulties of fruitgrowing in other countries.— (Signed) "S.R.," Eynsford, Kent, England.

Branches All States

News in Brief Personal Notes, etc.

The English Apple crop is reported as being only a quarter of normal, owing to unseasonable conditions.

The Sunkist citrus organisation in California has allocated \$200,000 for advertising to assist in marketing the heaviest Valencia crop on record.

It is estimated that Sydney's new markets will cost £125,000.

The Premier of N.S.W. has notified the Fruitgrowers' Federation that the proposed Fruit Marketing Organisation Act is not acceptable to Cabinet, and he has declined to introduce the measure.

At the recent conference of the Australian Dried Fruits Association at Red Cliffs, Vic., strong opposition was expressed to legislation which would authorise consumers' committees under the Dried Fruits Acts.

The value of cover crops is recognised by the Block E (near Renmark) branch of the South Australian Agricultural Bureau, which gives a trophy each year to the grower who can mature the best green manure cover crop by July 20.

In the growing of beans as a cover crop in the irrigation areas, the water table was lowered where land was in danger of becoming water logged.

The London correspondent of the "Fruit World and Market Grower" writes commending the activity of the Australian Apple and Pear Export Council in limiting quantities for export to U.K. in 1935, and for co-operating with New Zealand to the same end.

Also Western Australia is congratulated on having the distinctive redwood case for its high quality Apples. The British trade sees no reason why this type of case should be discontinued.

The annual conference of the West Australian Fruitgrowers' Association will be held on September 4, when many matters affecting the industry will be held on September 5, when preparation of items for the Hobart Conference.

As 1936 is the centenary year for South Australia, the suggestion for an all-Australian fruit conference in Adelaide has been put forward, not only the annual meeting of the Australian Apple and Pear Export Council, but a Pomological Conference, and a meeting of representatives of all sections of the Australian fruit industry. This project is well worth consideration.

At a duly convened meeting of the Lisarow Fruitgrowers' Association on August 7, it was unanimously decided to withdraw from the Fruitgrowers' Federation of N.S.W. The Lisarow Association is definitely opposed to the proposed Fruit Marketing Organisation Act.

The Marketing of Williams Pears is satisfactorily organised in Western Australia under a voluntary marketing system. Supplies have been regulated, prices stabilised, and freights substantially reduced by bulk loadings.

The three-quarter flat bushel case is recommended for Williams Pears in Western Australia for local marketing.

The storage life of Oranges and Grapes has been doubled and trebled by using iodised wraps, as against plain wraps, in England.

:: :: :: ::

By storing Tomatoes in iodised shavings, during tests in England, fungus rots were reduced to a minimum.

The N.S.W. Fruitgrowers' Federation has amended the proposed Fruit Marketing Organisation Act, and has deleted clauses vesting the fruit in the board of the organisation.

The cooling of Williams Pears immediately after picking is recommended by the W.A. Marketing Committee. Otherwise the 12-weeks' maximum marketing period is greatly reduced.

The Southern Victoria Fruitgrowers' Association is strongly opposed to the Marketing Bill now before Parliament.

The sale of large fruits by count instead of by weight is earnestly advocated by the Southern Victoria Fruitgrowers' Association. It is sought to make this method compulsory.

Buds are developing nicely on pome and stone fruits in N.S.W.

Losses from frost damage were suffered among Coastal Citrus Areas in N.S.W., also in some of the northern Banana plantations.

The Victorian Primary Products Marketing Act has passed the Legislative Assembly, with amendments, and it is now before the Legislative Council. Delegates from the fruit associations are urging that clauses be embodied in the Bill defining the separate sections of the fruit industry and providing for plural voting according to acreage.

The board of the Banana Growers' Federation of N.S.W. has decided to rebate approximately £4,000 from the profits of the bunchy top levy among Banana growers. This will be equivalent to about 1d. a case to shareholders, and 1d. a case to non-shareholders.

PERSONAL

After seven months abroad the deputy chairman of the Overseas Shipping Representatives' Association (Mr. N. Kingsbury) returned to Sydney by the Orient liner "Orama" at the end of August. Mr. Kingsbury is accompanied by his wife and family.

Mr. W. M. Carne, a scientist attached to the Council for Scientific and Industrial Research, is performing good service in studying Apple problems at the Hobart University. At the forthcoming conference of the Australian Apple and Pear Export Council at Hobart in October Mr. Carne will deliver an address entitled "The Relation of Crop Size to the Keeping of Apples."

Capt. W. J. Wade, representative in Australia for the Port of Manchester, who is now in England, will be absent from the Sydney office for

FRUITGROWERS' STATUTORY BOARDS.

Opposition to Consumers' Committees

IN THE PRIMARY PRODUCTS Marketing Bill now before the Victorian Parliament, a clause was inserted making provision for consumers' committees. The Bill is now before the Legislative Council, when this clause, among others, will be considered.

Expressions of opinions so far from fresh fruit growers, is adverse to this clause remaining in the Bill.

Dried Fruit Growers Oppose Consumers' Committee.

It was understood that an amendment to the Dried Fruits Act was proposed, authorising the appointment of consumers' committees.

At a meeting of the Australian Dried Fruits' Association at Red Cliffs during August, the following resolution was carried:

"That this conference of Victorian dried fruit growers regards the proposals of the Government to establish a consumers' committee under the Dried Fruits Act as unnecessary and unwarranted, and regards with concern the antagonism toward the organisation of the primary producers of the State. It considers it essential that organisations of primary producers, particularly those of dairy farmers and canned fruit growers, should join the dried fruit growers protesting against the proposed legislation."

Explanation by Minister.

The Minister for Agriculture (Mr. Hogan) subsequently issued a statement said the A.D.F.A. conference was under a misapprehension. It was not proposed to introduce legislation amending the Dried Fruits Acts in order to appoint consumers' committees. The provision for consumers' committees was limited to such products as came under the present Primary Products Marketing Bill.

five or six months. During the absence of his father, Mr. N. Wade will act as representative of Manchester.

Mr. R. H. Gent, managing director of the Kyabram Co-operative Fruit Preserving Co. Ltd., who has been on a business tour of Great Britain and Canada, is due to return to Melbourne on the s.s. "Monterey" on September 13.

Mr. H. W. Soothill, manager of the Producers' Co-operative Markets, Perth, is also the hon. sec. of the Marketing Committee of the W.A. Apple Sales Board. He is a capable organiser, and his services are highly esteemed. Mr. Soothill was a member of the delegation which recently studied marketing legislation and organisation in N.S.W. and Queensland. As a result of the report then presented, W.A. is wholly against legislation of this character.

Mr. W. A. Webb, of Doncaster, has been elected a life member of the Southern Victoria Fruitgrowers' Association in appreciation of his many years of valud service to the fruit industry.

"FRUIT WORLD" APPRECIATED.

Dear Sir,—We have pleasure in congratulating you upon the new issue of "The Fruit World." The reading matter is presented in a clearer, more concise and compelling form, whilst more scope for attractive advertising is presented. Your August issue sets an altogether higher standard and this, we hope, you will be able to maintain.

(Signed) W. B. Edwards, (Secretary) Nitrogen Fertilisers Pty. Ltd. (9/8/35).

ANSWER TO QUERY.

Apple Trees.—"J.L." Thulimbah, Queensland, writes:—I have some 20-year-old Apple trees, and I am thinking of giving them some sulphate of ammonia to try and get some new shoots from same. Can you advise me the quantity to give each tree, also what fertiliser is the best for Plum trees?

Answer (by R. A. Boyle, Nitrogen Fertilisers Pty. Ltd.): For the Apple trees apply about 3 lbs. sulphate of ammonia per tree as soon as possible. Preferably broadcast this around the tree just prior to ploughing; otherwise, apply and hoe or water in. For Plum trees you should do the same.

A suitable spring fertiliser for either Plums or Apples would be a mixture of about two parts superphosphate to two of sulphate of ammonia to one of muriate of potash. This mixture would analyse approximately as follows:—Nitrogen 8 per cent., phosphoric acid 9 per cent., potash 10 per cent. No doubt the fertiliser companies in Queensland supply a mixture analysing somewhat the same as this.

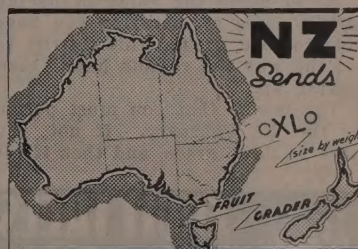
D. HARVEY'S IMPLEMENTS.

Many valuable types of orchard machinery have been patented and manufactured by Mr. D. Harvey, of Box Hill, Victoria. These include cultivation implements of all kinds, fruit graders, dehydrators, etc. Among the latest machines are the Tomato grader and brusher, and the Apple-wiping machine.

In Western Australia, where arsenical spraying is carried on until the fruit is practically ripe it has been found necessary to wipe the fruit before sending it to market. The machine invented by Mr. Harvey does this work so well that Tomato growers have expressed great appreciation.

The Apple-wiping machine is designed to receive fruit from a hopper or elevator; and, after being cleaned by brushes, is delivered straight to the grader.

In the wiping process the fruit is carried by belts over which are brushes for wiping the fruit: the brushes, by a cog arrangement, run at a slower speed than the conveyor belts, consequently the pace of the travelling Apples is slowed, and the fruit is revolved under the brushes, and is delivered to the grader with spray residue removed.



TO the fruitgrowers of AUSTRALIA

A radical forward move in mechanical fruit-sizing machinery!

SEE THE "OXLO" (SIZE BY WEIGHT)

Fruit Grader

AT THE

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Correspondence to the Editor.

MENACE OF NEGLECTED ORCHARDS.

Two Sprayings Before Christmas Should Be Compulsory.

(To the Editor, "Fruit World.")

Dear Sir,—I note by the "Fruit World" that Fruit Associations are trying to get the neglected orchards cleaned up of Codlin Moth. This is a very serious matter with commercial growers and, in my opinion, far worse than Black Spot.

When this matter is brought up it should be made sure that neglected orchards means from one tree upwards.

There is only one way to clean up the Cod in Moth, and that is make the law read that one spray of arsenate of lead must be put on all Apple and Pear trees by the middle of November and another by the middle of December, and then force the inspectors to see that is done in every garden within three miles of a commercial orchard. Penalty first offence £2, second offence £5.

If this were done the inspector could call on any garden after the middle of November and if the work was not done, prosecute the grower without further notice.

At present the inspector visits (sometimes) a garden and warns the owner. By the time he comes again the Codlin are all gone and a second brood started.

If the inspectors were doing their duty they would make more than their expenses in fines. You never hear of anyone getting prosecuted for neglecting to spray, which proves the department is not doing its duty to growers.

In a case within 300 yards of my orchard I got a neighbour to put a bandage on his trees. At Christmas time there were 43 grubs in the bandage, in April another 34, total 97. Now my orchard was free from Codlin till end of January, but then I got the benefit of all my neighbours' second brood and as my fruit was fairly large then, I had no hope of covering it.

If my neighbours had been compelled to spray twice before Christmas, I maintain I could do without my last two sprays and therefore get over the difficulty of arsenical residue on the Apples.

As to prove the value of having certain dates for spraying you have only to look around this district to see the way the rabbits have been cleared up.

The law is that you must poison by the 1st February. If not, you have 21 days' grace, and then if the

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Congratulations on the "Fruit World and Market Grower" in its new and enlarged form.

The "Fruit World and Market Grower" is of great value to the industry.

GEOFFREY W. BROWN, (Sgd.)

President Victorian Fruit Marketing Association.
Merricks N., Vic., 31/8/35.

work is not done you are fined. In 1920 you could easily go 5 miles out of the town and get 30 pairs of rabbits with a ferret, but the other day we did a 30-mile trip from Mirboo North to Warragul at 6 p.m. and did not see one rabbit.

The reason is that the inspectors are doing their duty, but every week they have had some one up before the court, and only last week one man was fined £5 with costs, another £2. If this were done with the Codlin Moth it would soon be as scarce as the rabbits. Now is the time to

prepare the Act so as to have it enforced this coming season. This, in my opinion, would be a much better plan than wasting our time and fruit trying to get something to replace arsenate of lead.—Yours, etc.,
C. P. NOBELIUS,
Vic., 27/7/35. Warragul.

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Certain Death to all Grubs that attack Fruit Trees.

It is estimated that of all Codlin Moths more than 60% are females and that a female moth lays as many as 50 eggs. On the assumption that only 50% of the eggs are fertile, a kill of 100 grubs in a tree band is definitely responsible for the prevention of 2,000 moths in the first year.

The Band is actually a double trap, as it not only traps the grubs in the corrugations lying immediately next to the trunk of the tree, but a similar number are trapped and killed in the second series of small passages which are formed by the smooth outside section of the Band against the corrugated section.

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Spraying for Insect Pest and Disease Control

Lime - Sulphur in the Orchard and Vineyard

WASHES AND POWDERS CONSIDERED

Importance of Polysulphide Content and Correct Physical and Chemical Combination

(By W. C. Robertson, Chemist, Victorian Department of Agriculture.)

IT IS INTERESTING to note that in spite of intensive propaganda to assist in the introduction of the more recent and complex spray materials, concentrated liquid lime-sulphur is still holding its own, while other mixtures of lime and sulphur are also being used as pest destroyers in orchards, market and home gardens throughout the world. As both caustic lime and sulphur have insecticidal and fungicidal properties, it is not surprising to find combinations or mixtures of the two substances proving most useful and effective in the control of insect pests and plant diseases.

There are four forms of lime-sulphur in commerce, viz.:—

- Concentrated liquid lime-sulphur,
- Dry lime-sulphur,
- Self-boiled lime-sulphur,
- Dry-mix lime-sulphur.

Concentrated Liquid Lime-Sulphur.

Concentrated liquid lime-sulphur is the best known lime-sulphur in Victorian horticulture. It is prepared by boiling together caustic lime and finely powdered sulphur under certain stringent conditions. The preparation of the amber-colored liquid is quite a simple matter providing quality and economy are of little consequence; but the manufacture of concentrated liquid lime-sulphur with a high content of free poly-sulphide sulphur is a process requiring the keen attention of a works chemist, who has at his disposal all the resources of a modern plant. In the preparation of concentrated liquid lime-sulphur on the farm there are numerous difficulties besetting the layman. Not the least is control over the raw materials, for the quality of the finished product depends largely upon the quality of the lime, and the purity and degree of fineness of the sulphur used.

Recently four leading manufacturers of lime in Victoria were asked to forward to the departmental laboratory a sample of the best stone lime, similar in quality to that supplied to the chemical trade. These samples were used in the laboratory for the preparation of liquid lime-sulphur by the usual method and formula.

Under these conditions, it was found that only two of the samples would make lime-sulphur of ordinary strength, and only one proved entirely satisfactory. The four samples were analysed for their active lime content, i.e., caustic calcium oxide (available lime) with the following results:—

No. 1, 74.3 per cent.; No. 2, 75.5 per cent.; No. 3, 89 per cent.; No. 4, 95.2 per cent.

It is suggested that the lime supplied to the orchardist and/or farmer would not be of superior quality to the samples under discussion; therefore, using the common formula recommended for the manufacture of the farm-made liquid, viz.,—50 lb. of burnt lime to 100 lb. of commercial sulphur flour, the following would be the equivalent amounts required of the four brands of burnt lime quoted:—

No. 1 67.3 lb., No. 2 66.2 lb., No. 3, 56.2 lb., No. 4 52.6 lb., each to 100 lb. of sulphur.

Unfortunately, there are no means on the farm for determining these figures, and, in addition, the greater the inferiority in quality of the burnt lime used in preparing liquid lime-sulphur, the greater will be the amount required, with a marked increase in the amount of sludge formed, a consequential decrease in the poly-sulphide sulphur content and increased cost of production.

The figures quoted indicate the first great difficulty in preparing farm-made lime-sulphur economically, and, incidentally, direct attention to the necessity for the standardisation of the quality of chemical lime under the Fungicides Act.

However, whereas the quality of the lime used in the preparation of home-made liquid lime-sulphur certainly has a marked effect on the quality and cost of the spray, this must not be taken to mean that, given the necessary high quality lime, the rest is easy.

It is a moot point whether the manufacture of lime-sulphur on the farm is an economical proposition.

If the manufacture is undertaken, the density of the liquid would require to be controlled with a minimum of 25 degrees Baume as the objective, but even this must not be taken as a recommendation for an entirely satisfactory product.

Concentrated liquid lime-sulphur consists of a mixture of sulphur compounds combined with lime in more or less stable combination. Discarding secondary compounds, which are present in small proportion, and which are of small importance, the sulphur in the concentrated liquid exists as:—

1. Thio-sulphate sulphur (T.S.S.),
2. Mono-sulphide sulphur (M.S.S.),
3. Free poly-sulphide sulphur (F.P.S.S.).

The two former compounds are more or less stable, whereas the latter is noted for its unstable nature. On exposure to air or with prolonged agitation the three compounds which mainly constitute liquid lime-sulphur undergo change, the thio-sulphate finally being converted into the sulphate (gypsum), with a deposition of amorphous sulphur. The mono-sulphide changes through thio-sulphate to sulphate and the poly-sulphide probably to thio-sulphate, with the liberation of free sulphur.

The exact reactions which take place during the formation and decomposition of lime-sulphur are not definitely known to chemists, but it is thought that decomposition follows along the lines enumerated above, and that the percentage of poly-sulphide sulphur decreases with the deposition of free sulphur.

It is generally acknowledged that poly-sulphide sulphur is the most active constituent and the present-day system is definitely in favor of valuing concentrated liquid lime-sulphur on its free poly-sulphide content.

With the object of testing the composition of the various brands of concentrated liquid lime-sulphur which are on the local market, samples were obtained from the various works and analysed in the Departmental Laboratory. For comparative purposes the analysis of a

typical farm-made liquid lime-sulphur and the average analysis of four English samples are included. The samples were analysed for their content of mono-sulphide, thio-sulphate and free poly-sulphide sulphur by the Cadmium Acetate method, which is very similar to the method employed by Goodwin & Martin.

The analytical results

are given in Table 1. A study of these figures will provide some interesting information. The analytical percentages are calculated weight in volume which means pounds per 10 gallons, so that in 10 gallons of the farm-made liquid there are 2.4 lb. of M.S.S., 2.43 lb. of T.S.S., 9.76 lb. of F.P.S.S., with a total of 14.78 lb. of sulphur associated with 6.38 lb. of lime and/or calcium. Similarly the highest quality commercial article contains 6.46 lb. of M.S.S., 1.53 lb. of T.S.S., 23.44 lb. of F.P.S.S.; these, with traces of other forms, making a total of 31.58 lb. of sulphur associated with 12.98 lb. of lime and/or calcium in every 10 gallons of the liquid. Calculating on the basis of the free poly-sulphide content of the two liquids, 10 gallons of the high grade commercial article containing 23.44 lb. of F.P.S.S. would be equivalent in free poly-sulphide strength to 24 gallons of the farm-made article, which means that, with the former available at 14 pence per gallon, the farm-made liquid would be worth about sixpence per gallon. It should be mentioned that, whereas the sample of high-grade commercial liquid lime-sulphur under discussion showed 23.44 lb. of F.P.S.S. and 31.58 lb. of total sulphur in 10 gallons, the guaranteed strength on the label is 20 and 28 lb. respectively, which means that the value of the farm-made product may have to be increased to sevenpence per gallon. This, of course, will depend on the analyses of the two liquids as received.

The standard for liquid lime-sulphur which was proclaimed under the Fungicides Act in 1920 is still in force and states that the spray "shall be wholly soluble in water and contain at least 20 per cent. of soluble sulphur and have a density of 24 deg. Baume."

There is not the slightest doubt but that this standard for concentrated lime-sulphur is too low and requires alteration.

In proposed legislation which is now before Parliament it will be necessary for manufacturers of liquid lime-sulphur to register a brand with the Department including the analysis of the liquid. This will not preclude the withdrawal of the existing standard and the prescribing of another standard in its place.

The Baume figure is not considered to be of paramount importance in standardising liquid lime-sulphur, but it is essential for controlling the quality of the farm-made spray, both with regard to free poly-sulphide and total soluble sulphur, and with a firm definition for concentrated liquid lime-sulphur including a high Baume figure for density as the proclaimed standard the marketing of a quality product would be ensured.

Using the usual formula and method for preparing liquid lime-sulphur on the farm the density of the finished article in degrees Baume if halved will give the approximate number of pounds of poly-sulphide sulphur in 10 gallons of the spray and likewise the formula

B deg x 10

8

where B deg. equals the Baume figure, will approximately equal the number of pounds of soluble sulphur in 10 gallons of the liquid. This method, however, will not hold for the highly concentrated commercial article.

It is doubtful whether any sample of farm-made liquid lime-sulphur would comply with the proclaimed standard, and proposed investigation this season will decide the point. It is known that in certain areas the farm-made liquid is being retailed. The manufacture and sale of this material may be based on the community system but this does not debar it from coming under the Fungicides Act, and in view of the fact that it may be of inferior strength and quality, the necessity for controlling these "makes" of lime-sulphur is obvious.

As it is only through the guaranteed percentage of soluble sulphur, or better still of the poly-sulphide sulphur, that liquid lime-sulphurs may be compared, all liquid lime-sulphur, including the commercialised farm-made article, must be guaranteed on the label attached to every tin or drum, for the adequate protection of the orchardist and farmer.

Referring again to Table 1 it will be observed that the percentage of the total soluble sulphur content present in the form of poly-sulphide is fairly constant at 65.66 per cent. excepting in the case of one local sample and the average of the samples analysed abroad which give 74.2 and 78.4 per cent. respectively.

As the average content of soluble sulphur in four of the local samples (23.11 per cent.) is not very different from that of the overseas samples (24.83 per cent.) it would appear that the marked difference in the respective poly-sulphide figures (i.e., the percentage of total soluble sulphur present as poly-sulphide) lies in the method of manufacture.

The analytical figures also suggest that standardisation should be based on the percentage of soluble sulphur plus percentage of soluble sulphur present as free poly-sulphide sulphur.

The grave disadvantage of concentrated liquid lime-sulphur is its aptitude to injure buds, foliage and fruit when used outside the dormant season.

As this injury may be caused by thio-sulphate sulphur any decrease in the percentage of this compound in the spray will minimise the risk of burn and injury.

Mono-sulphide sulphur is essential for the formation of poly-sulphide sulphur in the manufacture of the spray, but the thio-sulphate serves no useful purpose in this respect, and its presence must be regarded merely as a result of oxidation more or less uncontrolled. This is the reason why exposure of concentrated liquid lime-sulphur and its spray dilutions should be carefully avoided on the farm, thereby minimising the deterioration in poly-sulphide strength and the formation of harmful chemicals.

Dry Lime-Sulphur.

Dry lime-sulphur is the powder which remains on evaporating the concentrated liquid to dryness, with the necessary precautions and under

Lime Sulphur in the Orchard and Vineyard— (Continued from page 7)

Table 1.—Concentrated Liquid Lime-Sulphur.

[A sample of XL brand liquid lime-sulphur was not obtained in time for inclusion in this report. It is guaranteed 20/28 per cent. F.P.S.S. and total S, respectively, and may be regarded as being of equal strength to the highest quality sample analysed and recorded in this table.]

Per cent. by volume = pounds per 10 gallons.

Brand.	Specific Gravity.	Baume deg.	Mono-sulphide sulphur. %	Thio-sulphate sulphur. %	Sulphate sulphur. %	Free Poly-sulphide sulphur. %	Total Sulphur. %	Lime (CaO). %	Percentage of Total Sulphur as Free Poly-sulphide sulphur. %	Price per Gallon in 40-gal. Drums. s. d.
Orchard .. .	1.2634	37.2 deg.	4.84	2.56	0.18	15.44	23.38	11.63	66.0	1 2
Elephant .. .	1.2302	27.2 deg.	4.16	3.07	0.09	15.36	23.54	11.10	65.2	1 2
Blue Bell .. .	1.2415	28.2 deg.	4.13	2.88	0.09	15.20	23.02	10.70	66.0	1 2
Neptune .. .	1.2348	27.6 deg.	3.95	3.07	0.15	14.32	22.02	10.28	65.0	1 2
Vallo .. .	1.2933	32.9 deg.	6.46	1.50	0.12	23.44	31.58	12.98	74.2	1 2
Farm-made .. .	1.1504	19.0 deg.	2.40	2.43	..	9.76	14.78	6.38	66.0	..
English (average of 4 samples)	4.49	1.02	trace	19.49	24.83	..	78.4	..

conditions which reduce oxidation and decomposition to a minimum.

Self-Boiled Lime-Sulphur.

To avoid the risk of damage or in-

jury from the use of diluted concentrated liquid lime-sulphur in the late season, more particularly in orchard

culture as a cover spray and in market gardening and floriculture, self-boiled lime-sulphur is being recom-

mended and is being used in appreciable quantity in certain districts. This material takes the form of a light, fine powder, cream in color and odorless. The name is misleading, because self-boiled lime-sulphur bears practically no relation to the liquid or dry concentrated article.

It is mainly a wettable sulphur prepared by carefully slaking lime in the presence of a known amount of sulphur, the heat generated from the slaking lime being utilised to form some mono- and thio-sulphate sulphur during which an appreciable amount of sulphur is precipitated. The formula varies from equal quantities of sulphur and lime to two parts of the former to one part of the latter. The approximate analysis of self-boiled lime-sulphur as regards soluble sulphur compounds is as follows:—

Mono-sulphide sulphur — .06 per cent.

Thio-sulphate sulphur — 4.09 per cent.

Poly-sulphide sulphur—nil.

The figures represent weight in weight and will definitely differentiate between this powder and the liquid concentrate, and indicate that the fungicidal or insecticidal value of the powder is due to causes other than the presence of poly-sulphide.

Dry-Mix Lime-Sulphur.

Dry-mix lime-sulphur is very similar to the self-boiled mixture, and must not be confused with dry lime-sulphur. Dry-mix lime-sulphur is really a wettable sulphur made by the intimate mechanical admixture of 4 lb. of slaked lime and 8 lb. of commercial sulphur flour with the addition of a spreader such as casein at the rate of ½ lb. to every 12 lb. of the above mixture. These quantities are sufficient to make 50 gallons of spray.

Dry-mix lime-sulphur is largely used by the market gardener and floriculturist, and is favored as a safe substitute for liquid lime-sulphur in dual purpose spraying with nicotine sulphate and lead arsenate. When used with the latter, however, the amount of lime used in the mixture must be doubled. It is a substitute for self-boiled lime-sulphur, and Mr. S. Fish, biologist of the department, recommends it as of special value when used as a cover spray on Peaches, Plums, and Cherries.

The following analysis, showing the percentage of the three main soluble sulphur compounds present in lime-sulphur, proves dry-mix lime-sulphur to be a mechanical mixture of lime and sulphur almost identical with self-boiled lime-sulphur:—

Mono-sulphide sulphur Nil.

Thio-sulphate sulphur .64 per cent.

Poly-sulphide sulphur Nil.

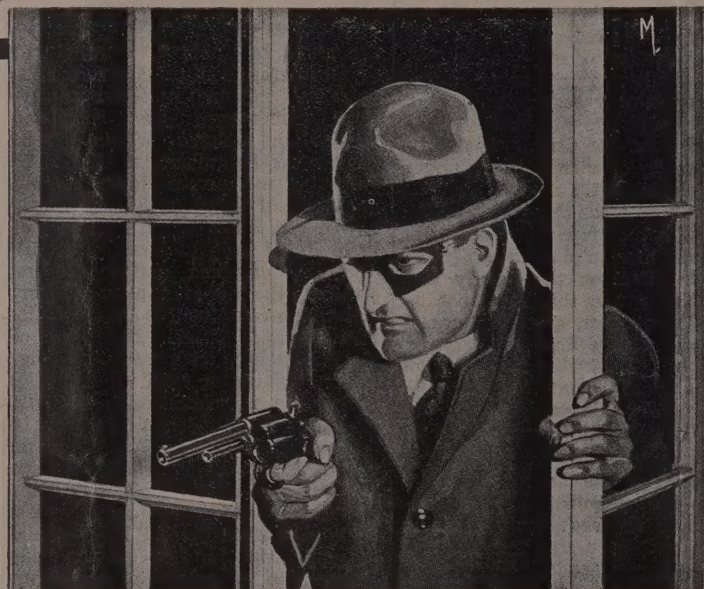
Summary.

In conclusion, the following main points in connection with lime-sulphur are summarised for the guidance of those who use this useful pest destroyer in any shape or form:—

1. Do not confuse liquid lime-sulphur with the self-boiled or dry-mix powders.
2. Do not regard dry lime-sulphur as similar to the self-boiled or dry-mix powders.
3. Do not purchase lime-sulphur in any form or of any description without a guaranteed analysis stating (a) in the case of liquid lime-sulphur, the percentage of soluble sulphur and the density in Baume degrees (this is required by law), (b) the percentage of free poly-sulphide sulphur in dry lime-sulphur powder, and (c) the percentages of sulphur and lime in the case of self-boiled and dry-mix powders.
4. Do not buy farm-made liquid lime-sulphur without the usual guarantee required by the Fungicides Act, and then only after a careful comparison of prices.

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The Codlin!



Keep your orchard Codlin-free by spraying your apples and pears with "Aero" Brand Arsenate of Lead. Awarded "Gold Medal" All-Australian Exhibition, 1930.

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Buzacott (Queensland) Ltd., 443 Adelaide Street, Brisbane.

TASMANIA (Northern Districts): Gardner & McKenzie Pty. Ltd., 64 Cameron Street, Launceston.

TASMANIA (Southern Districts): Fort Huon Fruitgrowers' Co-op. Association Ltd., Davey Street, Hobart.

Fruit Tree Spraying in Queensland.

By H. St. J. PRATT, Instructor in Fruit Culture.

5. Free poly-sulphide sulphur computed from the analysis of the commercial brands on the market this season is worth from sixpence to tenpence per pound per ten gallons.

6. It may be assumed that the lower the content of thio-sulphate sulphur in liquid lime-sulphur the safer the spray.

7. When mixing or diluting lime-sulphur prior to spraying, do not over-agitate. The greater the agitation, the greater the decomposition and reduction in effective strength.

8. Spray, as you mix or dilute, which means discarding any residue left over at the end of the day.

9. Take care to cleanse the spray outfit thoroughly prior to placing it away for the next spraying day.

10. When liquid lime-sulphur is used with lead arsenate as a dual purpose spray, there is double decomposition, which is considerably retarded by the addition of high-grade slaked lime. This also applies to a well-prepared self-boiled lime-sulphur, but not so much to the dry-mix powder.

11. When the full tank, drum, or tin of liquid lime-sulphur is not emptied at one spraying, always replace the volume of liquid withdrawn with an equal volume of rain water, and keep the container airtight. Mark the receptacle with the new lime-sulphur strength. This action is recommended once only, as dilution should not go on continually.

12. If rain water is not available for spraying make sure the water to be used is suitable for the purpose.

The departmental chemist will test and report on the suitability of a sample of water for the purpose on receipt of the regulation fee of 10/6. Any water which has no pronounced odor or taste, and which holds clay in suspension well may be regarded as suitable without recourse to chemical analysis.

BLACK SPOT OF APPLE AND PEAR.

Correct Stages at Which to Spray.

N.S.W. Experience.

IT HAS BEEN DEMONSTRATED that practically complete control of Black Spot of the Apple can be obtained by following out the spray programme advocated by the N.S.W. Dept. of Agriculture. The recommendation is as follows:—

Apple Spray Programme.

(a) Spray with Bordeaux mixture (6-4-40) at "spur-burst" stage.

(b) Lime-sulphur (1 in 14), 26 deg. Baume, at "pink" stage.

(c) Lime-sulphur (1 in 35), 26 deg. Baume, at "calyx" stage, when the petals are falling, combined with arsenate of lead for Codlin Moth.

(d) Lime-sulphur (1 in 35), 26 deg. Baume, combined with the first, second and third "cover" sprays of arsenate of lead if necessary.

Pear Spray Programme.

(a) Spray with Bordeaux mixture (6-6-40) at "green-tip" and "spur-burst" stages.

(b) Lime-sulphur (1 in 20), 26 deg. Baume, at "white" stage (equal to "pink" in apple).

(c) Lime-sulphur (1 in 50), 26 deg. Baume, combined with the first, second and third "cover" sprays of arsenate of lead.

Prior to spraying, all dead and diseased wood should be pruned out and burnt.

BY REGULATION under the Diseases in Plants Acts, it is compulsory that all deciduous fruit trees in the Stanthorpe Fruit District receive a dormant or winter spray during the months of July or August of either (1) Miscible oil, (2) lime sulphur, or (3) tar distillate.

(1) The miscible oil must be used at the minimum strength of 1 gall. oil to 20 galls. water. This spray is for the control of San Jose scale, woolly aphis, red mite, black and green peach aphis, and any other insects—it being purely an insecticidal spray.

(2) Lime and Sulphur: 1½ galls. lime and sulphur concentrate registered under "The Pest Destroyers Act of 1923" is required to 10 galls. water, and/or 1 gall, 33 deg. Baume lime and sulphur concentrate to 10 galls. water. This spray is a fungicide as well as an insecticide, and is a partial control for all insects enumerated in paragraph (1), and also for curly leaf of the Peach and other fungus diseases.

(3) Tar Distillate: In the case of stone fruits, 1 gall. tar distillate is required to 33 galls. water, and in the case of pip fruits, 1 gall. to 25 galls. water. This insecticidal spray is chiefly used for control of black and green aphis, but is going out of favor chiefly because of the risk of damaging fruit buds if the sap is moving in the trees and the buds swelling.

Spraying programmes for the various diseases set out are as follow:—

Codlin Moth:

Calyx Spray—2 lbs. arsenate of lead powder to 40 galls water.

Cover Sprays—1 lb. arsenate of lead powder to 40 galls. water.

With the arsenate of lead sprays add 1 lb. calcium casein spreader to 100 galls. of spray—it helps to keep the lead in suspension and increases the coverage and wetting properties.

Instead of the lead cover sprays, the alternative is:—

White Oil: 1 gall. to 80 galls. water; and

Black Leaf 40: 1 gall. to 640 galls. water.

The white oil and black leaf 40 is, I think, slightly superior as a cover

spray to the arsenate of lead, but it must be remembered that colloidal sulphur (the control measure for powdery mildew) cannot be used in conjunction or within fourteen days.

Powdery Mildew of the Apple:

As far as possible prune off all infected buds at pruning.

1. Lime and sulphur 1 gall to 30 galls. water between open cluster and pink.

2. Colloidal sulphur 2 lbs. + ½ gall. lime sulphur to 100 galls. arsenate of lead spray at petal fall.

3. Repeat in ten days or a fortnight.

4. Repeat at monthly intervals, i.e., with each arsenate of lead spray for codlin moth.

It must be remembered that white oil must not be used within fourteen days of using the sulphur.

Brown Rot of Stone Fruits:

At pruning, carefully cut off and burn all dead or affected shoots or limbs; collect and burn all mummied fruits; and omit all cultivation at blossoming time, as spores may be thus liberated.

Spray Schedule:—

1. At bud movement: Bordeaux mixture 6-4-40;

2. At petal fall: Lime and sulphur 1 to 50;

3. When fruit half grown: Lime and sulphur, 1 to 120;

4. One week before picking: Lime and sulphur 1 to 120;

5. After fruit has been picked: Lime and sulphur 1 to 120.

Colloidal sulphur 2 lbs. to 100 galls. water can be substituted in each case for Nos. 3, 4 and 5.

With Apricots, spray application (2) should be of Bordeaux mixture 2-3-40 instead of lime and sulphur.

The above spray schedule is also used for Peach Scab and Shot Hole, and spray (1) for Curly Leaf of the Peach. Black Spot of Pear, also Blister Disease of Apple:—

1. At green tip: Bordeaux mixture 5-4-50; or lime and sulphur 1 in 10.

2. Between open cluster and pink: Bordeaux 3-4-50; or lime and sulphur 1 in 30.

3. At petal fall, i.e., with first arsen-

ate of lead spray: Bordeaux 3-4-50; lime and sulphur 1 in 100.

4. Ten days later: Ditto.

5. With each lead spray: Ditto.

6. Shortly before picking: Lime and sulphur 1 in 100.

Black and Green Aphis of the Peach:

Apart from the winter spray, the following control measures are recommended:—

When colonies of aphis are first noticed, they should be immediately sprayed with ½ pint black leaf 40 to 40 galls. water + 1 lb. common soap or ½ lb. soft soap, followed up by a second spray within forty-eight hours—the reason being that the first broods of aphis give birth to living young, and the second spray will clean up any young broods that the aphis may give birth to after receiving the first spray.

Terminal Die-back of the Apple:

The current season's growth starts away all right apparently, but at about Christmas time when the first period of growth stops and before the second growth starts the terminals take on a khaki color, and do not start again, but die back instead.

To control, spray with 6-4-40 Bordeaux mixture at bud movement, and again with 4-4-40 Bordeaux at the middle of December, during the first week in January, and again during the third week in January.

Leaf Scorch of Apple:

Lime and sulphur 1½ galls. Sulphate of iron 5 lbs.

Water 50 galls.

Use between the first and second codlin moth sprays.

Leaf scorch may be and often is, due to potash deficiency and also nitrogen deficiency, but sulphate of iron is a good tonic and is distinctly helpful.

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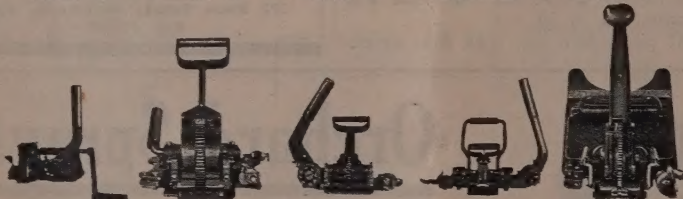
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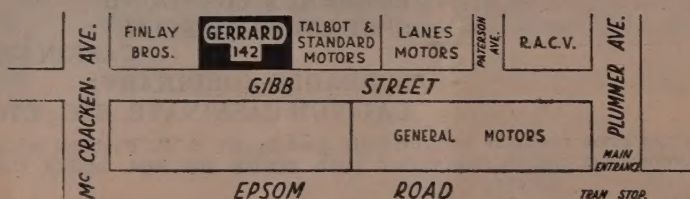
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Fungus Disease Control.

Black Spot and Powdery Mildew—Brown Rot of Stone Fruits—Oidium—Tomato Leaf Mould—New Book by Dr. Cunningham.

LAST SEASON fungous diseases, owing to the comparatively wet spring and early summer, were a definite factor in the reduction of the exportable crop of Apples and Pears. It is not difficult to instance Apples, as export statistics readily disclose the reduction in crop available for export—much more so than is the case with brown rot of stone fruits and oidium of vines. It would be very interesting to have complete statistics of the actual loss in fruit and money, and to compare the loss with what it would have cost to provide an efficient spray programme.

Before and during last spraying season, the "Fruit World" published a series of articles by Dr. G. H. Cunningham, of New Zealand, a well-known authority on fruit diseases and their prevention. That these articles were appreciated is disclosed by reports received from the various districts, not only of Victoria, but also other States. In these, Dr. Cunningham refers to the excellent control being secured in New Zealand over fungous diseases by the use of Colloidal sulphur. According to this authority, and checked by a series of tests over a period of five years, colloidal sulphur gives a control equal, if not better than any other known remedy; with this advantage that colloidal sulphur is more beneficial than harmful to the tree and foliage.

Some of the leading growers throughout Australia decided to carry out their own tests last season—with satisfaction in most cases. In some instances results are held to be disappointing, but there is an old motto: "There is no use locking the stable door after the horse has bolted," and we are afraid that this applied in quite a few instances. Last season the infection of fungous diseases was probably unexpected, maybe through favorable preceding seasons—conditions which are always liable to gradually bring a false sense of security.

Any programme to give control must be complete, and while it sometimes may seem a waste of money to apply sprays when conditions are favorable, that is the only worth while insurance available to the grower.

Having once decided to adopt a satisfactory programme, the next essential is to order materials which have been tested and proved. In this connection growers are well advised to stick to the brands which are marketed by the many firms of standing catering for the trade both here and abroad.

In Victoria an amended Fungicides Act is going through Parliament. Manures are sold on a guaranteed analysis, and so are most foods under the Health Act, whereas sprays—which are just as important to the fruitgrower—have been a matter of go as you please. In the case of arsenates and sulphurs, one of the most important features, in addition to analysis, is the degree of fineness of the particles. A recognised analyst will soon determine this point, and users can quickly satisfy themselves by submitting samples for analysis. From New Zealand it is stated that two brands of colloidal sulphur (both of English manufacture) have in particular measured up to the test for particle size.

Dr. Cunningham's New Book.

It is pleasing to be able to announce having received from Dr. Cunningham a synopsis of his new book, "Plant Protection by the Aid of Therapeutants." He tells us that in this book he has brought up to date and elaborated all his investigations over the past few years on the question of sprays and spraying. A glance at the table of contents leads us to the conclusion that it will be the most comprehensive work of its kind on this subject. Take, for instance, the chapter dealing with the polysulphides; it includes—Lime Sulphur—Historical manufacture of, chemistry, units of measurement, types, home-made, effects on fungi, insects and plants, other sulphur and lime preparations, self boiled lime sulphur, dry mix lime sulphur, dry lime sulphur, and all types of polysulphides.

The chapters dealing with oils, copper, arsenates, sulphurs, plant extracts, spreaders, adhesives, suspensions and activators are just as complete as the polysulphide series.

A very interesting chapter deals with spraying apparatus and methods of application. This includes spray pump structure and function parts, accessory apparatus (tanks, agitators, nozzles, factors affecting efficacy of hose fittings), application, technique, spray coverage, volume delivery, pressures nozzles influencing, portable power outfits, stationary power outfits layout and operation of, sprays employed, materials, tables of dilutions and quantities of sulphurs, combination sprays, methods of preparation, effects of combining, safe and dangerous combinations. Hard waters, periods of applications, stages of developments of plants illustrated and defined orchard spray schedules, complete schedules for control of diseases and pests of pome, stone and citrus fruits.

Other chapters deal with dusts and dusting, fumigants and fumigation.

It is impossible in this short article to give even a brief summary of the wealth of material incorporated in this book, which is destined to be a standard text book for every up-to-date grower. The foregoing extracts will, however, give some idea of its comprehensive nature, and once again proof is given of the wonderful work the scientist is doing for the man on the land.

:: :: :: ::

The following are based on the recommendations of Dr. G. H. Cunningham:—

Black Spot and Powdery Mildew of Pome Fruits.

(Applied in conjunction with Codlin Moth Programme.)

1. Green Tip. Bordeaux mixture, 6-4-40.

2. Pinking. Colloidal sulphur, 1 lb.—40 gallons.

3. Calyx. Colloidal sulphur, 1 lb.—50 gallons, plus lead arsenate, 3 lbs.—100 galls.

4, 5, 6, 7. Cover Sprays. Same as for calyx.

Where black spot is a serious problem, a weak lime sulphur solution may be included, using from—1-80 for the pinking and 1-160 in subsequent applications; but care must be taken in mixing, as follows:—

Mixing: Colloidal sulphur should first be thoroughly mixed to a thin

cream with about 3-4 times its weight of water and then added to the bulk of water or other diluted spraying materials. When employing combination sprays, always add colloidal sulphur last, as follows:—

First make full dilution of lime sulphur. If arsenate of lead is also being used, mix the necessary quantity (dry) with hydrated lime (dry), render to a thin cream, and then add to the diluted lime sulphur. Add the cream of colloidal sulphur last and thoroughly agitate the whole.

Note. Hydrated lime is used 3 lbs. to 100 gallons, and is only necessary when lime sulphur and lead arsenate are both included in the combination. If desired, calcium caseinate may be employed in lieu of hydrated lime, using $\frac{1}{2}$ to 1 lb. for each 100 gallons of mixture.

Brown Rot of Stone Fruits.

1. As Buds are Swelling, Bordeaux, 5-4-50.

2. When Petals have Fallen, colloidal sulphur, 1 lb.-40 gallons.

3. Three to Four Weeks After Petal Fall, colloidal sulphur, 1 lb.-50 gallons.

4. Apply (3) at monthly intervals until just before picking.

In addition to spraying, the following precautions should be observed:

1. Prune out and burn all cankered twigs.

2. Remove from tree and soil all mummied fruits.

3. Cultivate three weeks prior to blooming (to prevent ascospore discharge).

Oidium (Powdery Mildew of Vines).

Colloidal sulphur, 1 lb.-50 gallons, just prior to blossoming and again as found necessary during the growing period, especially during moist or muggy weather.

Tomato Leaf Mould.

Colloidal sulphur, 1 lb.-50 gallons, when plants are young, and then immediately any sign of disease appears, and again two weeks later if still in evidence.

FRUIT FLY CONTROL.

Spring is with us again, and soon the pest of the orchard will make itself felt. The Fruit Fly in particular destructive in N.S.W. and is probably one of the worst pests that the grower of summer fruits has to contend with. The N.S.W. Department of Agriculture in an endeavour to check the pest, has gazetted regulations imposing severe penalties on anyone on whose property fruit trees are growing, and who do not make any effort to spray the trees or use fly traps. Many persons have already been fined for not carrying out the regulations in Sydney. All fallen fruit must be picked up, and any affected by the fruit fly must be destroyed by burning or boiling, or placed in pits specially covered to prevent the fly from escaping and doing further damage.

The use of a glass fly trap in which a lure has been placed has proved effective in controlling the pest and spraying the trees with a special preparation has also proved effective.

The glass traps must be in a position on the trees five weeks prior to the fruit ripening, or the spraying must be carried out every week for five weeks prior to the ripening of the fruit, if they are to become effective. Special preparations have been manufactured for the traps, and for spraying, by the Kylwyll Watsonia Co. of Strone-avenue, Wahroonga, and can be purchased at any of the large stores and at the shops of seedsmen and florists.

BUYING FERTILISERS

Importance of the Concentration of Quality

(By R. A. Boyle, M.Sc.)

BUYERS OF ALL CLASSES of goods, to-day, are learning to appreciate that it is the concentration of quality in an article that really matters. Such discrimination is the natural sequence to better education and greater enlightenment on scientific matters. This applies most particularly to food-stuffs and, in fact, food in tablet form has already passed the joking stage. It is becoming increasingly imperative for growers of agricultural and pastoral products to adopt practices such as the breeding and balanced feeding of plants and animals, etc.

The selling of farm produce purely and simply on a quantity or tonnage basis is becoming a thing of the past. The largest proportion of milk produced, for instance, is bought on its butter fat content, sugar cane on its commercial sugar content, and so on. Even buyers of Australian wheat are beginning to question its so-called "baking strength." Chemists are already endeavouring to find a measure of quality in fruit and it is conceivable that before long this will be determined and fruit may even be sold under a guaranteed analysis. There are those mysterious substances known as vitamins and already the public are interesting themselves in the vitamin contents of various foodstuffs.

All such trends as these demand equal discrimination on the part of the producers. All slipshod, "hit and miss" practices in agriculture must be replaced by scientific methods. Growers must take a much more intelligent interest in such things as the source and pedigree of the seed that they sow; likewise of the animals which they carry, the species and strains of grasses and the nutrient balance of all their stock feed.

There could be no better illustration of the significance of the concentration of quality in a product than is afforded by one of the farmer's own requirements, namely, fertilisers. Just as his butter factory is primarily a buyer of the butter fat in milk and nothing else, so is the farmer a buyer of nitrogen, phosphate and potash, either singly or in combination, and not whatever else

goes with them. Take as an example a citrus grower to whom it has been amply proved by experience and experiment that he must apply nitrogen to his soil. That grower should then be in the market for nitrogen. His first enquiry should be for the price of nitrogen. What does nitrogen cost? How can he get the greatest concentration of nitrogen in a fertiliser at the lowest cost? Surely these are the first considerations!

Guidance Afforded by Fertilisers Registration Act.

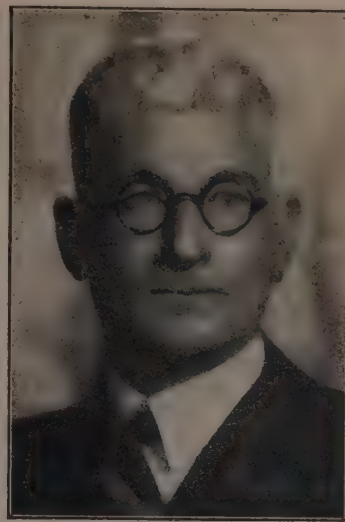
The farmer is more fortunate than the butter factory manager, in that he is protected under an Act of Parliament, which provides that all vendors of fertilisers must register and guarantee the analysis of their products. These analyses must be stated on all bags and invoices and may be demanded from a vendor. By comparing the nitrogen contents and prices of various fertilisers on offer and making simple calculations, it can easily be ascertained which provides the cheapest nitrogen. Actually, some Departments of Agriculture make these calculations for growers and publish a list of so-called "unit values," from which can be seen at a glance which forms of nitrogen, phosphate and potash provide the cheapest plant food. According to the list published by the Dept. of Agriculture, Victoria, in the Journal of Agriculture, January, 1935, the cheapest forms of the three plant foods are sulphate of ammonia, supplying nitrogen, superphosphate, and muriate of potash, potash. The unit values of the plant foods in these were:

Nitrogen	12/1d. per 1 per cent.
Phosphate	3/6d. per 1 per cent.
Potash	6/11d. per 1 per cent.

Owing to price reductions in these three fertilisers since this list was issued, these values are lower at the present moment. Having these costs before one, it is fairly easy to evaluate any mixture of the plant foods once their analysis is known.

Importance of Concentration.

Although sulphate of ammonia provides the cheapest nitrogen, it is



Mr. R. A. Boyle, M.Sc.

one of the dearest nitrogenous fertilisers, per ton. This is because it is the most concentrated supplier of nitrogen, a matter of very considerable importance where freight, cartage and handling costs are concerned. Even though a 20 per cent. nitrogenous fertiliser provides no cheaper nitrogen per unit than a 5 per cent. one, it works out cheaper on the farm on account of savings in handling costs.

Not only may a grower pay too dearly for his nitrogen by simply purchasing on a "per ton" basis, without an examination of the analysis, but he may actually do his crop very little, if any, good. For example, suppose that it has been found that 2½-lbs. per tree of sulphate of ammonia, i.e., $\frac{1}{2}$ -lb. of pure nitrogen per annum is necessary to keep a certain citrus tree in reasonable health. If, for some reason or other a different nitrogenous fertiliser is preferred, containing, say, 10 per cent. of nitrogen, then quite obviously, twice as much of it is re-

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quired, namely, 5-lbs. per tree, if the equivalent of 2½-lbs. of sulphate of ammonia or ¼-lb. of pure nitrogen is desired. Surely it is just as obvious that if only 2½-lbs. per tree of the 10 per cent. nitrogenous fertiliser is given, then the tree must suffer on account of a shortage of ¼-lb. of pure nitrogen.

Different Forms of Nitrogen.

It is contended by some that the price per unit of a plant food is not the only criterion. Advantages are sometimes claimed for the organic form over the inorganic. There are certainly differences, chiefly, however, due to the speed of action, although they each ultimately supply identically the same plant food. It would require a long scientific story to compare the respective values of these two forms. They depend very largely upon the crop to be fertilised. Certain vegetables and other crops with a long growing period might prefer the slower acting organic forms but fruit trees, particularly deciduous fruits, prefer to get as much available plant food as possible in a relatively short time. It is important to note in this regard that the so-called "natural organic" manures, embracing all animal excreta, e.g., farmyard manure, belong

to a somewhat different category. These are not valued on account of their plant food content so much as for their supply of humus-giving material and perhaps certain micro-organisms as well. In orchard practice to-day, humus-giving material is most cheaply and conveniently applied by means of cover crops and, unlike fertilisers, should be applied at the rate of tons, not cwts., per acre.

When in Doubt, Seek Reliable Advice.

The chief point, however, is that if growers are to continue to prosper, they must be at least as keen in buying their requirements as the consumers are in purchasing their products. They should at least know, for instance, how much plant food the fertilisers which they buy contain, so that they may know what quantity to apply for their crops, whilst if there is a considerable difference between the costs of, say, two different forms of nitrogen, then they should seek reliable advice before making a selection and decide whether any extra cost is warranted. The Departments of Agriculture in the various States will always supply information in relation to fertiliser values.

FROST PREVENTION

Important Conference at Mildura

Necessity for Raising Temperatures by Direct Heating.

OWING TO THE LOSS of fruit through the effects of spring frosts, in recent years on the irrigation and non-irrigated fruit-growing areas, an effort is now being made to co-ordinate individual efforts into what might be considered a standard practice for future occasions. It has long been thought that some concerted action was warranted, because of the frequency of frost damage both in notorious frost valleys and out of them.

Through the efforts of the Federal Council of the A.D.F.A., a meeting of members representing the States of Victoria, S.A. and N.S.W., was held at Mildura on Monday last, August 19, to consider the best means of combating these spring frosts. The following members and Government officials were present:—E. S. Creaton (Mildura), C. M. Martin (Red

Cliffs), E. Pescott (Dept. of Agr., Vic.), J. F. Steward (A.D.F.A. Organiser), R. Roberts (Supervisor, Dept. of Agr., Vic.), M. J. Milne (Red Cliffs), J. Jenkin (Nyah West), J. McChonchie (Red Cliffs), R. C. Polkinghorn (Woorinen), A. T. Godkin (Red Cliffs), P. T. Simpson (Irymple), R. M. Voullaire (Merbein), D. D. Brown (Dept. of Agr., Vic.), O. Weste (Renmark), A. E. Cameron (Red Cliffs), A. V. Lyon (C.S. and I.R.), J. A. Gordon (Red Cliffs), H. Young (Red Cliffs), W. Heaysman (Cardross), B. Bochin (Lights Pass, S.A.), E. L. Hodge (Cardell, S.A.), Gifford Hall ("Steel Blayde," Mildura), L. E. Raggett (Yenda, N.S.W.), R. Curran (Berri, S.A.), C. W. Till (Barmora, S.A.), L. Maddern (Monash, S.A.).

After a long discussion on the various merits of oil and briquettes as a fuel-burning substance, it was resolved to appoint a sub-committee, which resulted in the following representatives being nominated:—Messrs. Boehm, Creaton, Brown, Maddern, Raggett, Pescott, Roberts, Lyon and Gordon being appointed. It was resolved by the sub-committee that operations for this year would be carried out at two or three noted frost pockets, and both types of burners will be tried out with a view to finding out comparative costs and effectiveness of both fuels. The experiments would be supervised by the various Department Supervisors and Mr. Lyon of the C.S.I.R.

Every detail of variation of air currents will be noted, together with meteorological data available at the time of frosts to enable experiments to keep exact records in various localities.

In the discussions during the day, many interesting factors came to light, and it was found that with variations in geographical situations, frosts behaved in different ways in each locality and that each frost locality would be treated as an individual unit.

The main decision arrived at by the meeting was that whereas smudge fires might influence the temperature to the extent of two degrees and save fruit in a light frost, the only means of definitely raising the temperature sufficient to be of any use in a more severe frost was by means of direct orchard heating. Whether briquettes or oil fuel would ultimately be adopted would depend upon results of accurate tests being made.—"Nemo," Renmark, S.A., 20/8/35.

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Dangerous Temperatures Given for Various Fruits

DURING THE PAST FEW YEARS, the question of damage to crops by frost has been causing increasing concern among growers, for in some cases severe losses have been sustained. In 1933, for instance, the loss of tobacco crops in Victoria caused by unexpectedly early autumn frosts was estimated at £150,000. At other times Apples, Pears, Cherries, Apricots, vines, citrus fruits, etc., have all suffered to a greater or lesser extent.

The Formation of Frosts.

On a clear day heat is radiated from the sun to the earth. This heat passes straight through the air, and has but little effect on it. It is received by the surface of the ground, or by any exposed body, so that the surface of the ground is warmed. The air on ground level is then warmed in turn by contact with the hot ground. Being heated, it tends to rise, and thus, even in the absence of any wind, there is a tendency to form circulating currents of air, and the warm air is carried up to a considerable height.

On a clear night a converse process takes place. The surface of the

ground is sufficiently warm, it is evident that the amount of inversion necessary to cause a frost would be so very great that a frost will be impossible, or at any rate, most unlikely.

When a frost occurs, the air is only cooled by contact with the ground or other exposed surface, such as leaves, these surfaces being cooled first by radiation. This implies that heat is flowing from the air to the exposed surface, and since heat cannot flow unless a difference of temperature exists, the temperature of the air must be higher than that of the ground and of the leaves. This actually happens, and differences as high as 6 degs. F., or even more, are possible. The importance of this will be seen later.

Methods of Preventing Frosts.

For combating frost producers have used screens, artificial wind and heat.

The foregoing account of the factors which influence frost will serve as a guide to their prevention.

Heating has so far proved the best method.

If an inversion exists, the warm air will soon reach a level at which

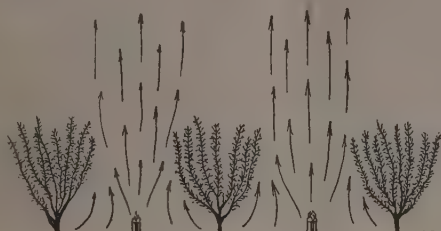


Fig. 1. No Inversion Heat goes straight upwards.

ground radiates heat away into outside space, which is very cold, and the ground surface cools accordingly. The air at ground level is then cooled in turn by contact with the cold ground, and its tendency is to fall, just as hot air tends to rise. Since it is already on ground level, it simply stays there and cools still further. Provided there is no wind, there is nothing to cause a circulation of air, so that while a thin layer of air at ground level continues to cool, the air above is almost unaffected, and will remain fairly warm throughout the night.

This difference between the temperature of air at ground level and the warmer air higher up is known as temperature inversion, differences as high as 11 degrees F. having been recorded between air one foot from the ground and air 25 feet from the ground. The amount of inversion, as shown later, is a very important factor in frost prevention, and will vary widely according to weather and also locality.

If during the night the temperature of the ground falls to 32 degrees F. or lower, a frost occurs. It is evident that this ground temperature during the night is governed, firstly, by the day temperature and secondly, by the amount of surface cooling or inversion which takes place during the night. Thus a frost can be caused by a low general temperature and a slight inversion, or by a fairly high general temperature and a severe inversion. If, however, the weather is

the atmosphere is at the same temperature as itself. Having reached this level, its tendency to rise then disappears, and it spreads sideways. Subsequent supplies of warm air will then be deflected sideways at an ever decreasing level. At the same time the cold air which is drawn in will no longer be so cold, but will be air which has already passed under the partial influence of the heaters. Thus an effective heating is maintained right down to ground level, though the ground level is the last part to benefit.

Dangerous Temperatures.

Since the whole object of heating or other protection is to keep the temperature of the orchard above danger

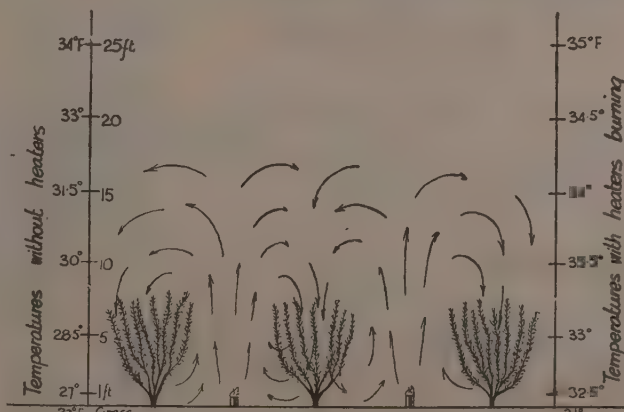


Fig 2 Good Temperature Inversion Heat deflected downwards by warm air higher up.

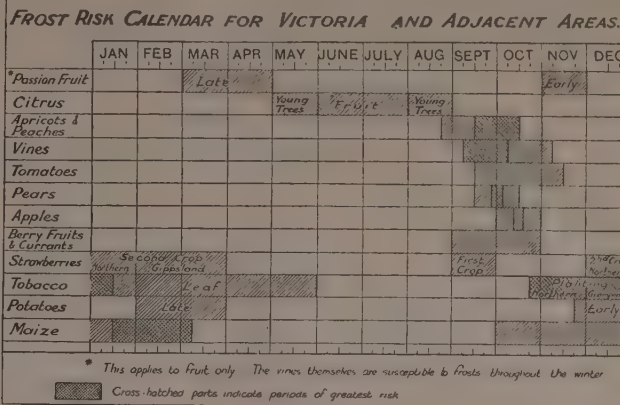


Fig 3.

point, it is essential to know where that lies, and to measure the temperature of the orchard accurately.

The following data has been supplied by the Commonwealth Meteorological Bureau, Melbourne, and shows the degree of cold which will probably be endured by different fruits up to thirty minutes without damage.

Fruit.	Stage of Development.		
	Buds Closed but showing color.	Full Bloom.	Small Green Fruits.
	Deg. F.	Deg. F.	Deg. F.
Apples	27	29	30
Apricots	30	31	32
Almonds	28	30	31
Blackberries	28	28	28
Cherries	25	28	30
Grapes	31	32	32
Lemons	—	32	30
Oranges	30	30	—
Pears	28	29	30
Peaches	25	28	30
Plums	30	31	31
Prunes	30	31	31
Raspberries	28	28	28
Strawberries	28	28	28

The danger period for each fruit is shown graphically in Fig. 3, reproduced by courtesy of the Commonwealth Meteorological Bureau.

It was shown earlier that any object, such as a blossom, which is well sheltered from the sky, will be at a higher temperature than one which is not sheltered. This is why, in the case of a vine, for instance, the outlying shoots will be killed before those near the centre of the vine. The difference in temperature may be 2 degrees F. or even more.

Because of a temperature inversion, the top of the tree will be warmer than the bottom. There may be as much as 4 degrees difference in a height of 10 feet, and the temperature will vary throughout the tree.

Thus, although definite damaging temperatures are quoted for each fruit, the effect of a frost is progressive. A light frost will kill only those shoots and blossoms which are outlying and are on a low level; a heavy frost will kill more of them, and a very heavy frost will kill them all.

Many growers have had an experience of trees being damaged by frost so that the lower boughs bore no fruit at all, while the upper boughs bore a full crop.

When observing temperatures and arranging for protection, a grower must bear these differences in mind.

Recommended thermometers include (a) mercury thermometers, (b) steel cased colored alcohol thermometers, (c) clear alcohol minimum thermometers.

Advice regarding the most suitable thermometers for any particular purpose can be obtained from the Commonwealth Meteorological Bureau.

Whatever thermometers are used, it is essential that they should be accurate. They should be checked on purchase, and afterwards rechecked prior to each danger period.

In a citrus orchard, the damage is to the fruits themselves. They are usually well sheltered by foliage, so that the use of a sheltered thermometer is preferable.

With deciduous fruits, the buds, blossoms and young fruits are affected at a time when the foliage is very thin, so that they receive little protection from radiation. In this case, fully exposed thermometers should be used, and steel cased thermometers have the benefit of greater robustness for this purpose, though alcohol thermometers may be used

In the case of low-growing crops, thermometers should be mounted at a correspondingly lower level, otherwise the crop may be frosted and destroyed while the thermometers still read higher than freezing point.

Whatever thermometers are used, and however they are placed, it is essential that they be mounted uniformly. Also it is strongly advisable that each grower should check his thermometers during an actual frost, and see for himself what temperatures are indicated at the time when frost begins to form. This is necessary, as even accurate thermometers can show strange and apparently unaccountable readings when they are not placed correctly.

Temperature inversion and alarm thermometers are available in several approved types.

Requirements of Heaters.

Wood fires and oil heaters of various kinds have been tried. Wood fires are not satisfactory for several reasons.

The foregoing information was courteously supplied by the Shell Co. of Australia, which company has conducted many successful tests with oil fuel.

FROST PREVENTION.

Value of Solid Fuel Heaters.

Following the successful demonstration of solid fuel orchard heaters—using briquettes in a patent burner—Messrs. Egan and Williams are now turning out large numbers of their patent heaters. One order alone was for 700 burners. It is understood the C.S.I.R. is obtaining these burners for tests in various parts of Australia.

CITRUS NEWS & NOTES

CITRUS FRUIT CULTURE.

Bordeaux Spraying Necessary to Check Fungus Infection After Showery Weather.

The Superintendent of Horticulture (Mr. J. M. Ward) advises that reports from various citrus districts indicate that the continued showery weather has been favourable to the development of several fungus diseases which disfigure the rind of citrus fruits. These markings are usually of a brown or black colour and in some cases penetrate the pulp of the fruit and impart a musty flavour.

Previous tests by the Department, carried out in similar seasons to the present one, have shown that these troubles can be most satisfactorily controlled by spraying with bordeaux mixture at a strength of 3-3-50. Two applications, one late autumn following by one in the spring, are necessary in some seasons to prevent infection of Washington Navel and Late Valencia oranges. Treatment is preventive rather than curative.

Growers who have adopted these preventive measures are now harvesting clean fruit. Should the showery weather continue, further trouble can be expected with the Late Valencia oranges. Growers of this late variety are strongly advised to take precautionary measures. Should further details be required, they can be obtained from the Department of Agriculture.

ORANGE EXPORT.

Some Prices Unpayable in London.

The Agent-General for South Australia in London (Mr. C. F. McCann) recently commented unfavorably on some Australian Oranges in London. Mr. McCann stated that Australia produced Oranges of the right quality for the London market, but the poor quality fruit sent per s.s. "Barrabool" by speculators was distinctly harmful.

:: :: :: ::

With the 2/- bounty added, opening prices of 7/- to 15/- a case for Australian Oranges in the British market would be payable to growers in some instances, but not so remunerative as local values, states the secretary of the Federal Citrus Council (Mr. A. W. Schwennessen).

Unpayable sales would be those of N.S.W. Common Oranges at 7/- to 9/- a case, he said.

South Australia prices, at 11/- to 15/- a case compared favorably with a year ago.

Only about 50,000 cases had been sent from Australia to Britain this year, compared with 179,000 cases last season.

M.I.A. ORANGES IN MELBOURNE

One of the nicest packs of Oranges on the Melbourne Market is the "Blue Sapphire" brand from the packing shed of G. H. Carlson, Leeton. Retailers are now asking for this brand. The "Blue Sapphire" label, too, is very attractive.

CITRUS CROPS IN VICTORIA.

Interesting Statistics.

The Victorian Government Statist (Mr. O. Gawler) advises that citrus fruit production for 1934-35 showed a substantial decrease in the Orange crop compared with the previous season, and an increase in the Lemon crop.

The statistics show that there were 2,374 growers, compared with 2,459 in 1933-34. The Navel Orange crop was 385,906 bushels, compared with 387,060 bushels the previous season. The total production of Valencias was 165,570 bushels, compared with 173,467 bushels in 1933-34, and the totals of other varieties were as follows:—Mediterranean Sweeties, 15,609 bushels (15,651 bushels in 1933-34); other Common, 26,883 (31,899); Mandarin, 17,712 (21,622); Seville 15,074 (16,904); Grapefruits, 12,571 (11,858). The Lemon and Limes crop was 220,787 bushels, compared with 208,546 in 1933-34.

IMPLEMENTS OF INTEREST TO FRUITGROWERS.

Messrs. Mitchell & Co., of West Footscray, Vic., will be making an excellent display of all kinds of agricultural machinery at the forthcoming Melbourne Royal Show. The many lines of interest to fruitgrowers will include "Mitchell" Ploughs, Set and Stump Jump, Mouldboard and Discs in many sizes; single furrow ploughs with channel beams to the multi-furrow tractor ploughs, fitted with a power lift that allows the ploughs to be raised or lowered half an inch at every pull of the control rope; a full line of harrows, cultivators, scarifiers, etc. Orchard spray plant powered by the world-famous Lister engine, and the Myer type

"AERO" BRAND ARSENATE OF LEAD.

Attention is directed to the interesting and attractive series of advertisements appearing in the "Fruit World" from the manufacturers of Bickford's "Aero" brand of arsenate of lead.

These advertisements direct particular attention to the losses occasioned each year to the fruit industry by codlin moth. This firm has been manufacturing and selling arsenate of lead for over 25 years and their "Aero" brand arsenate of lead is the result of a special study by their analytical department of the requirements of this important spray product. Supplies of "Aero" brand arsenate of lead are obtainable from A. M. Bickford & Sons Ltd., Adelaide, Brisbane, or their Interstate agents as follows: Tasmania: Gardner & McKenzie Pty. Ltd., 64 Cameron-street, Launceston (Northern Districts); Port Huon Fruitgrowers' Co-op. Association Ltd., Davey-street, Hobart (Southern Districts); New South Wales: Buzacott & Co. Ltd., 7-11 Market-street, Sydney; Victoria: Ramsay & Treganowan Ltd., 469-477 Latrobe-street, Melbourne; Western Australia: Felton, Grimwade & Bickford Ltd., 297 Murray-street, Perth and Kalgoorlie; Queensland: Buzacott's (Queensland) Ltd., 443 Adelaide-street, Brisbane.

pump with porcelain lined cylinders, nickel steel gears, stainless steel valves and seats. The overall height of this pump is 5 ft. 2 ins. Lister oil engines in sizes from 3 h.p. upwards. They will also show general farm implements, shearing machines, "Diablo" cream separators, noxious weed destroyers, electric refrigerators, etc.

"HARVEY" FRUIT GRADERS and Processing Equipment

PEAR GRADERS—These Machines can be made to any capacity to suit the small grower or the large Packing Shed. Twin Machines to handle two or more qualities simultaneously can be supplied. The pears are carried along stalk downwards and are not rolled. They can be thrown on to the sorting table which is constructed in a special manner with a canvas belt to ensure no bruising. The sizing device of the "HARVEY" Pear Grader is provided with rubber belts running in the same direction, and arranged to carry along the pears motionless to their respective bins. The grading sections are adjustable to give any grade desired and are independently operated. The Machine is fitted with spring floor bins which obviate bruising. Can be operated equally well by hand or power and is a fast and efficient Machine. Supplied in standard sizes or to any size or specification desired. In the London Market where consignments had been particularly watched for mechanical grader marks, pears graded by the "HARVEY" Grader have opened up in perfect condition, being beautifully graded and the pack showed up to the best advantage, and it is said, that no better fruit had been received from any part of the world.

"HARVEY" MODEL 90 L.I. GRADER, with Sorter Elevator, Hopper & Roller Automatic feed



ROYAL SHOW Stand No.

— 58 —
PLUMMER AVENUE

REMOVE ARSENATE OF LEAD POISON FROM PEARS AND APPLES

by using

"HARVEY"

HYDROCHLORIC ACID

Washing Machines

Will Not and Cannot Bruise the Fruit—Abreast of Best Machines Offering in the World To-day.

THOROUGH WASHING.

CHEAP TO OPERATE

ABOVE ALL — EFFICIENT.

PRUNE GROWERS—

WRITE FOR PARTICULARS OF OUR PRUNE GRADERS.

"Harvey" Implements

Recognised as the Standard and Most Efficient on the World's Market To-day.

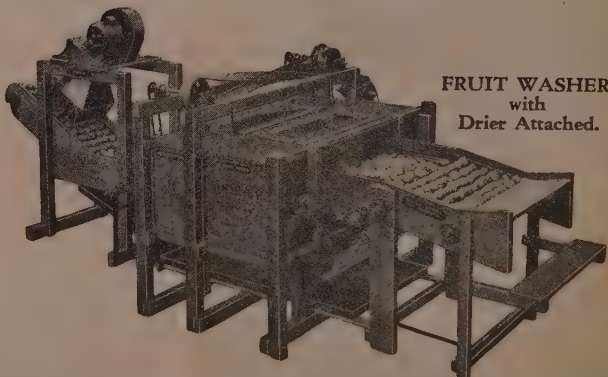
ASK FOR YOUR REQUIREMENTS.

Citrus Graders and Dry Polisher Brushes

COMPLETE WET AND DRY LATEST PROCESSING EQUIPMENT.

Including Soaking, Wet Scrubbing, Sterilizing, Drying and Dry Polishing Equipment, Sorting Tables and Graders to Give 2 or 3 Qualities.

Built to Suit the Requirements of CITRUS GROWERS AND PACKING HOUSES.



FRUIT WASHER with Drier Attached.

D. HARVEY, Orchard Implement Specialist, BOX HILL, Victoria

Dried Fruits Department

The South Australian Dried Fruits Board Issues Annual Report

REGULATED MARKETING

THE SIXTH ANNUAL REPORT of the South Australian Dried Fruits Board for the year ending February 28, 1935, nominally the 1934 season, makes very good reading as indicative of the condition of the industry in that State. Amongst many matters dealt with in the very full report, the following study covers the most important sections.

The Dried Fruits Act, 1934.

An amending Dried Fruits Act was passed continuing control till March 31, 1940, and consolidating the several State Acts hitherto in operation. The present Act also empowers the Board to grant a limited form of registration of dried tree fruit packing houses.

State legislation is restricted to intrastate trade in dried fruits. Power designed to regulate trade between

cots 1,136 tons, Nectarines 63 tons, and Pears 257 tons.

Export.

The export season was regarded as favourable for the disposal of 1934 season's dried vine fruits, the total quantity shipped overseas amounting to 53,722 tons, made up as follows:—

	Tons.
Currants	13,682
Sultanas	36,122
Lexias	3,918
	53,722

The average price per ton realized on the markets of the United Kingdom were £36/1/- for Currants, £36/15/9 for Sultanas, and £33/4/5 for Lexias.

Whereas 16,200 tons of dried fruits were carried over into 1934,

polonga 1 (40), Clare 2 (981), Barossa 4 (662), McLaren Vale 3 (889), Langhorn's Creek 2 (172), Port Adelaide 1 (80). Total 46 sheds (22,114 tons).

Unlawful Trading.

It is believed that as a result of the activities of the Board's inspectors, unlawful trading in dried fruits is restricted to isolated instances. Constant vigilance, however, is essential and the pecuniary advantage to be gained in illicit trafficking is attractive to the lawbreaker. The patrolling of roads and of river crossings, the night visits to premises which are suspects, as well as the presence of a vigilant officer moving about the areas, unquestionably proved a wholesome restraint on the disloyal grower.

In his annual report to the Board, the investigation officer states:—

"I consider the constant supervision maintained over retailers has been the means of closing the avenues for illicit dealing and forcing the retailer to obtain his supplies through legitimate channels only."

During the year eight instances of unlawful trading were detected.



A
TYPICAL
DRIED FRUITS
VINEYARD.

the States, for the protection of the Australian quota, is secured by the Commonwealth Dried Fruits Act, 1928-1935, which has appointed the Board a "prescribed authority" for the Commonwealth.

Production.

The total pack for the Commonwealth for the season was dried vine fruits 69,591 tons and dried tree fruits 4,508 tons. Of this quantity South Australia provided 21,314 tons and 2,135 tons respectively. Divided into varieties the State production was: **Vine Fruits:** Currants 8,415 tons, Sultanas 10,040 tons, and Lexias 2,859 tons. **Tree Fruits:** Prunes 428 tons, Peaches 251 tons, Apri-

the whole of that carryover as well as all shipments during the season under review were cleared, making it comparatively easy to dispose of the new season's exports which were awaited.

Packing Houses.

The number of packing houses registered for dried vine fruits remains at 46, plus three additional packing houses for dried tree fruits.

The distribution of packing houses, with their production of all varieties (in brackets) is shown as:—

Renmark 10 sheds (5,803 tons), Berri 5 (5,281), Barmora-Cobdogla 3 (3,075), Waikerie 4 (2,249), Moorook 8 (1,366), Cadell 3 (716), My-

Three complaints were laid and convictions secured in all instances.

Improved Culture.

In its report, two years ago, the Board made reference to the establishment of experimental tests designed to improve the quality of fruit for drying purposes.

The experimental plots established in the Clare, Barossa, and McLaren Vale areas, where improved pruning methods and experiments in the rehabilitation of the older vines were carried out, have already revealed an appreciable improvement and so far the vines appear to have responded to the treatment. The work was continued during the past year.

Publicity.

The publicity activities are under the control of a committee, representative of the four State Boards and the A.D.F.A. The programme consists of window displays, recipe books, newspaper advertising, school competitions, touring publicity vans throughout the States in charge of officers who deliver lectures, assisted by moving picture films. It is felt that the continuance of the programme is essential if the present consumption of dried fruit in Australia—estimated at from 13,000 to 15,000 tons—is to be maintained.

SECURE YOUR FRUIT CASES

.. from a reliable manufacturer. ..
Write for further particulars and prices.
E. W. HALL & BLOOM PTY. LTD.,
Case Manufacturers,
Whitehorse Rd., Mitcham, Vic.

LOCAL CONSUMPTION INCREASES

Australian Quotas Raised.

THE Commonwealth demand for dried fruits is still being maintained, and compares very favourably with the position last year. This is particularly so in the case of Lexias, of which it is anticipated that approximately 70% of the crop will be disposed of this year in Australia. The demand for dried tree fruits is also satisfactory as is shown by the fact that, whilst last year the home consumption quota for Dried Peaches was only 33½%, this year it has been raised to 60%; the same applies also to Dried Pears. The market for Prunes on the other hand is not so satisfactory, and the fact that Australian consumption of this variety equals only ½ lb. per head per annum as compared to 1½ lbs. in the U.S.A., indicates that there is considerable scope for improving the market for Dried Prunes.

The Dried Fruits Joint Publicity Committee has continued its activities during the month, and has produced a large cut-out for display purposes in grocers' windows, which is a credit both to the artist and the Committee for its realistic representation of the actual dried fruits. The Committee as usual will have a display in the Government Pavilion at the forthcoming Royal Show, and a stall in the Hall of Commerce. It is also arranging a display at the British Medical Association's Exhibition at the University this month, which, it is anticipated, thousands of medical men from Australia and Overseas will attend.

PROTEST AGAINST INCREASED WATER RATE.

The Merbein Dried Fruit Growers' Union has decided to enter a strong protest against the increase of the water rate to £3/10/- for six waterings, as compared with the old rate of £3/1/9, which it is stated met the cost of supply.

BANANAS IN ENGLAND.

Two million, six hundred thousand bunches of Bananas (35,978 tons) were landed by the Port of London Authority last year. This compares with 1,958,687 bunches (24,724 tons) during the previous year, an increase of 46 per cent.



TWO GRADERS IN ONE THE "OXLO" (SIZE BY WEIGHT)

Sizes two-color grades in one operation — SOLVING the problem of color grading effectively and at low cost.

Manufactured by
D. W. BINGHAM & CO. PTY. LTD.
South Melbourne.

DISTRIBUTORS:
N. N. McLEAN PTY. LTD.
Wholesale Fruit Market
QUEEN STREET, MELBOURNE, C.I.
Telephone: F 6994

COSAN

THE WORLD'S SUPREME

Colloidal Liquid Sulphur

THE ORIGINAL ARTICLE AS USED IN NEW ZEALAND.

For Summer Spraying

Use COSAN and insure your crops against Brown Rot, Black Spot, Rust, Leaf Curl, Mildews, and all other Fungus diseases during growth. COSAN mixes satisfactorily with lead and will not damage fruit or foliage.

Colloidal Sulphur Pty. Ltd.

466 Swanston St., Carlton, N.3, Vic.

(Opposite Carlton Brewery.)

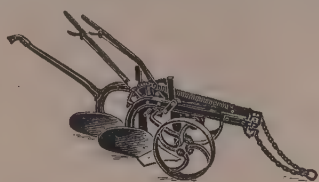
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SUNSHINE AND MASSEY HARRIS ORCHARD IMPLEMENTS

WORK WELL and LAST LONG

An extensive exhibit of these will be shown at the Royal Agricultural Show, Melbourne, where farmers, orchardists, vigneron, pastoralists, etc., will be welcome, and can leisurely examine—without being importuned to buy—a full range of implements and machines that are made to work well and last long. Some will be shown in action, and with those which appear for the first time, are well worth a visit from farmers who desire knowledge of the latest Sunshine and Massey Harris productions.

SUNBIRD Mouldboard Plough



An easy to handle plough of great strength, extraordinary clearance, and very light draught, for orchards, vineyards, etc. The 19-inch, well-shaped mouldboard ploughs 8 inches wide and up to 6 inches deep, turns a good sod, and buries manurial crops and heavy weed-growths effectively. Levers are down when in working position, and with the wide range of draught adjustment provided for either side, ploughing up to within 6 inches of trees or vines can be done without discomfort to user or team.

2-furrow, without coulters . . . £12 0 0

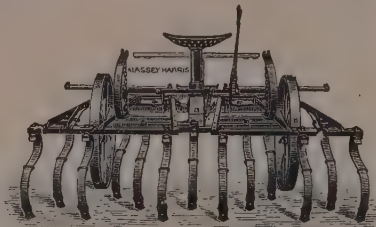
3-furrow, without coulters . . . £16 0 0

Knife and Circular Coulters at small extra charge.

Delivery at Sunshine, less 2½% for cash, or liberal extended terms can be quoted.

Write for the Sunbird Booklet—free on request—for full details.

Massey Harris Spring Tyne Cultivator



Light but strong, durable, and in a convenient size with low wheels, for work close to trees, vines, berry bushes, and general use in orchards, vineyards, small farms, market gardens, etc. The teeth—set in three rows for easy clearance of rubbish—work under powerful pressure and will penetrate hard soil. They cut and tear the roots of weeds, thistles, etc., and drag them to the surface to be destroyed; also break clods, and leave the soil in the right condition to conserve moisture and plant food.

The easy-to-reach lever applies the pressure to the teeth when cultivating, also lifts them clear of the ground for transportation.

9-tyne, with pole, 2-horse trees and neck-yoke £12/10/-
13-tyne, with pole, 2-horse trees and neck-yoke £14/15/-
(As illustrated.)

Obtainable with forecarriage in lieu of pole and swings, at small extra charge.

Delivery at Sunshine, less 2% for cash, or liberal extended terms can be quoted.

An Invitation to Show Visitors

A cordial invitation is extended to Show Visitors to call at the Sunshine Exhibit in Skene Street, where all inquiries will receive courteous attention—free of obligation to buy. If you cannot call, ask the local agent, or write to us for the illustrated general catalogue and complete price lists—free and post free.

H. V. McKay Massey Harris Pty. Ltd.

SUNSHINE HARVESTER WORKS, SUNSHINE

AUSTRALIAN DRIED FRUITS.

Sales in Great Britain.

The Commonwealth Dried Fruits Export Control Board advise that during the week ended 22nd August, 1,252 tons of Australian dried fruits were taken by buyers in the British market.

844 tons of Sultanas were sold at an average of £37/9/4 per ton and 397 tons of Currants averaged £29/14/4 per ton.

Shipments to Great Britain to date total 27,846 tons. It is not anticipated that the exports to Great Britain will reach the total despatched to that market in 1934.

13,434 tons of the present crop have been sold and there were afloat or in store in Great Britain 14,412 tons. These figures compare with 6,951 tons sold at the corresponding date in 1934 and 23,880 tons afloat or in store at the same period of last year.

The offtake is deemed to be satisfactory more especially in view of the forecasts of heavy crops in Turkey and California.

DRIED FRUIT EXPORTS.

Proportions Prescribed.

In accordance with regulations under the Dried Fruits Act, which provide as a condition of the issue of licenses that a prescribed percentage of each variety of fruit shall be exported, the Minister for Commerce (Dr. Page) announced early in August that the following percentages of fruit produced during the 1935 season shall be exported:—Currants, 85 per cent.; Sultanas, 87½ per cent.; Lexias, 40 per cent.; Prunes, 60 per cent.; Peaches, 40 per cent.; Pears, 40 per cent.; Apricots, 50 per cent.; Nectarines, 50 per cent.

The season covers the calendar year, except in the cases of Apricots and Nectarines, when it refers to fruits produced between November 1, 1934, and October 31, 1935.

SHOW TO COME.

Lemnos—October 9 (Fruit and Flower).



"Plane" Brand Dusts

"Beauty" (Knapsack) Dusters

"Superior" (Rotary) Dusters

ARE MANUFACTURED BY

N. N. McLEAN Pty. Ltd.

395 Queen Street
MELBOURNE

Fruit Transport by Sea To Interstate Markets

IN REFRIGERATOR or COOL, WELL VENTILATED 'TWEEN DECK specially adapted for Fruit Carriage and fitted with powerful Electric Fans.

FAST MODERN PASSENGER VESSELS

Sail every Wednesday and Saturday for Sydney and Brisbane.
Sail every Saturday for Townsville and Cairns.

CARGO VESSELS sail Weekly for Sydney and Brisbane (Tuesdays).

SPECIAL REDUCED RATES OF FREIGHT.

FURTHER INFORMATION, SAILING DATES, ETC., WILL BE GLADLY SUPPLIED ON APPLICATION TO THE UNDER-MENTIONED COMPANIES AT MELBOURNE:—

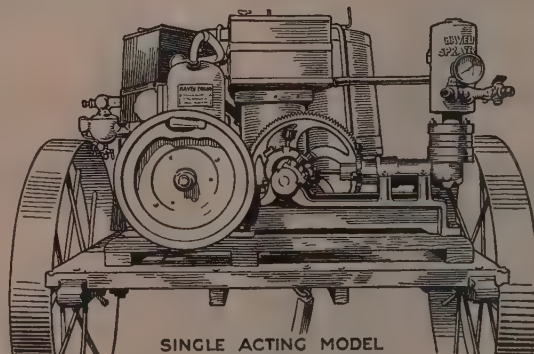
HOWARD SMITH LTD.

A.U.S.N. CO. LTD.

ADELAIDE STEAMSHIP Co. Ltd. McILWRAITH McEACHARN Ltd.

MELBOURNE STEAMSHIP Co. Ltd. HUDDART PARKER LTD.

The BAVE-U Power Sprayer



SINGLE ACTING MODEL

will be
exhibited as
usual at
The Royal
Agricultural
Show.

STAND

97

Smith St.

Manufactured by:

RUSSELL & COMPANY
Box Hill, E11. - - - - Victoria

Cold Storage In Australasia

Cool Stores' Association of Victoria

Quarterly Meeting Well Attended

General Matters Discussed.

THE 71st quarterly meeting of the Orchardists' and Fruit Cool Stores' Association of Victoria was held at the Commercial Travelers' Association rooms on August 27, when the president, Mr. J. J. Tully, conducted the meeting. There were also present Messrs. F. Moore (Blackburn) vice-president, H. J. Noonan (secretary), Col. J. H. Laing (Harcourt), T. A. White (Somer-ville), H. Petty (Doncaster W.), F. Petty (orchardists), John Tully (West Doncaster), F. J. Byrne (Wantirna), C. H. Wallace (Wantirna), A. E. Hocking (Graceburn Valley), H. J. Willoughby (Tyabb), G. F. Fankhauser (E. Burwood), J. G. Aird (Ringwood), F. A. Bloom (Doncaster East), H. M. McLean (Harcourt), R. Langley (Croydon), H. Pump (Ringwood), A. Thiele (Orchardists), and Mr. W. J. Williamson, M.L.C. (Portland). Apologies were received from Messrs. L. G. Cole (Tyabb), A. Chandler (Croydon), J. M. Ward (Dept. of Agriculture), R. Lawford (Blackburn), and J. W. Barrett and W. McKinley (Ringwood).

Government Loans. Mr. Moore reported that following last meeting the executive committee had made representations to the Government asking for a review of interest rates on loans made to cool stores. The Government has agreed to a general uniform reduction to 4 per cent. for the ensuing twelve months, when the matter will be again reviewed. This means a definite saving to most stores.

Vegetation Diseases Act. It was reported that the V.F.M.A. had recommended to the Government a more stringent supervision of neglected and diseased orchards. It was felt that the association should support the V.F.M.A. and any other body seeking to offset the dangers incurred by the spread of disease. Mr. Hocking moved that the association make direct representations to the Minister that urgent attention be given to the matter. While the difficulty of policing the whole State was appreciated, more inspectors should be provided, and proceedings taken against offenders whose trees become a menace by lack of spraying or other eradication of disease. The alteration of the Act, or further legislation, should be introduced to meet this critical problem. The proposal was approved.

Protection of Growers. The secretary read a letter forwarded to the Minister asking that a bond of £2,000 should be required from export agents. The Director of Agriculture now advises that a flat rate bond of £250 has been accepted as a guarantee from both export and local agents.

Insurance. Following requests made to insurance companies for a reduction of insurance on cool stores, the secretary advised receipt of a letter from the Fire Underwriters' Association, which stated that as cool stores were already listed at the lowest rate applicable, a further reduction was impossible.

Marketing Bill. A long discussion was allowed upon the Marketing of Primary Products Act. Mr. Williamson, M.L.A. attended, and advised the conference upon the passage of the Bill to date, and invited delegates to meet members of the Legislature that night and place their views regarding the fruit industry before them. It was decided to support the amendments recommended, the main ones being that a 60 per cent. favorable vote be necessary before the Act applies to fruit, that any board elected shall consist of four fruit producers and one Government nominee, and that if fruit is declared a commodity the following six sections be provided for:—Apples, Pears, stone-fruits, citrus, canning fruits, other soft fruits.

Engine Drivers' Case. Mr. Aird reported upon the application of the Engine Drivers' Award to cool stores. Though an award of the Federal Arbitration Court, and not at present applicable to cool stores in Victoria, he advises cool stores to pay the award rates.

Association Activities. Mr. Bloom submitted a criticism that the association seems to be devoting more time to matters of the general fruit industry, instead of those relating specifically to the cool stores end. The president reminded delegates that all stores are invited to submit topics for consideration at each meeting, and little response is received. Mr. Moore stated that the association is the only body having so much at stake in the industry, and which can therefore be fairly said to represent all branches of the industry. When they go to the Government they go as a united body representative of all sections. Speakers spoke both for and against the criticism, but the general feeling seemed to be that the general matters appearing on the agenda were important, and were the province of the association.

Research. Mr. Moore reported upon a deputation to the Minister urging the continuance and extension of research work in regard to fruit. The Minister gave a sympathetic hearing to the deputation, and Mr.

APPRECIATION FROM N.S.W.

Your August issue was full of splendid information. Members are appreciative of the value of the contents of the "Fruit World and Market Grower."

L. J. JENKINS,
President,
N.S.W. Chamber of Fruit
and Vegetable Industries.
Sydney, 17/8/35.

Moore believes that the present research will continue, and that an experimental station in the Goulburn Valley will be provided shortly.

Conference With Legislators. After the meeting, a party of delegates attended Parliament House and conferred with members before the House considered the Marketing Bill. Views of growers in regard to proposed amendments were presented, and members asked to consider these when debating the measure.

KYABRAM COOL STORE.

33,000-Case Capacity.

The Kyabram Co-operative Fruit Preserving Co. Ltd. is erecting as an adjunct to the cannery a cool store, the capacity of which will be approximately 33,000 cases. The construction is of brick, and comprises five chambers. Completion of the store, it is believed, will fill a long-felt want.

The managing director of the company, Mr. R. H. Gent, who has been on a business tour of Great Britain and Canada, will return to Melbourne per s.s. "Monterey," due to arrive in Melbourne on September 13.

VICTORIA.

Apples and Pears in Cool Store.

ACCORDING TO RETURNS furnished to the Victorian Government Statist by persons in charge of cool stores the following quantities of Apples and Pears were in cool storage on the nights of June 30 and July 31, 1935:—

	June 30.	July 31.
	Cases.	Cases.
Apples . . .	750,000	605,000
Pears . . .	70,000	50,000

COOL STORES FOR SYDNEY.

The Fruit Industry Model Cold Stores Ltd. is the title of a new company formed recently for the purpose of building cool stores for fruit in the vicinity of the City Markets, Sydney. At the inaugural meeting of the provisional directors elected were: Messrs. W. H. Price, T. Hewison, A. J. Cooper, J. Hawke and L. Jenkins, and the capital fixed at £60,000. The housing capacity of the building is to be 100,000 cases and a canvass of the trade has resulted in more than this number being under offer for storage during the first year.

New Registration.

ROTARY HOE CULTIVATORS LTD. (August 20). Nominal capital, £20,000, in £1 shares. Objects: To carry on the business of buying, selling and distributing agricultural and other machinery, etc. Subscribers: A. C. Howard, K. C. McCormick, F. G. White, R. E. Hayes, F. G. Hayes, A. G. Howard and L. J. Finch (one share each). Registered office, Northmead (N.S.W.).

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The Right Material for Plant Disease Prevention and Control
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GRADES—Mixed Crystals, Fines, Granulated (Snow), Packed in Suitable Containers for Growers' Requirements.

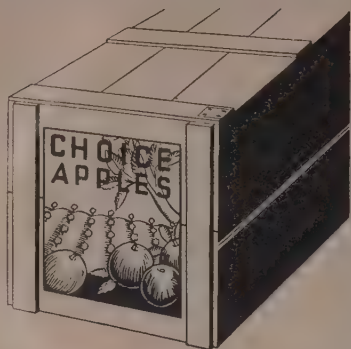
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Two Islands close Central Queensland coast, or lease land cheap for fruitgrowing and poultry. Enquiries:

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Sarina, Queensland.



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COLD WATER PASTE
IN THE WORLD

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FRUIT GROWERS

Protect
Your Crops
from the
devastating
BIRDS

Dangling
Glitterer



Seedling Beds will now mature in safety, and the result of your good hard work will soon appear through the ground in substantial growth, whereas with the old methods the birds would soon uproot the seeds.

Crown Crystal Glass Co. Ltd.



Stump Pulling machine ready for operation.

MANY YEARS AGO the firm of Trehwella Bros., which commenced operation as saw-millers, were faced with the problem of clearing giant trees before the lands could be put to economic use. It was whilst engaged in this enterprise that the necessity arose for adequate equipment for log rolling and handling. As a result of the special study given to the class of implement required Trehwella Bros. produced the "Wallaby Jack." Other people desirous of clearing land got to know of this ingenious implement and the firm decided to manufacture "Wallaby" Jacks in a commercial way. Three types of "Wallaby" Jacks are used including a 2½ ton machine suitable for log rolling the lighter kinds of lifts; a 4-ton "Wallaby" Jack for sawmills and for general land clearing work and a 6-ton machine where heavier lifts are required.

A further demand set in for a type of machine suitable for heavy grubbing work and Trehwella Bros. turned their attention to the production of the "Monkey" type of Jack where the casing moves up the pillar. The 8-ton "Monkey" Jack is suitable for grubbing low down roots and stumps without the necessity of cutting the roots. The 10-ton "Monkey" Jack is a similar machine but more powerful. The "Monkey" grubber, probably the outstanding machine for land clearing purposes, was then produced. This grubber is remarkably serviceable as a hand power tree or stump puller, a feature being that it can be used when the ground is too wet for the use of an ordinary jack. Apart from tree pulling it can be used as a winch.

The "Monkey" Grubber can be operated by hand power, is portable and remarkably efficient. The power for the "Monkey" Grubber is obtained by the application of a patented pawl and ratchet gear to a drum, to which the end of a steel cable is affixed. All wearing parts are made of the finest grade hardened, forged steel. The use of the finest steel available in manufacture has been the means of avoiding unnecessary weight. The machine is simple to operate: A cable from the drum is attached to the tree or stump, preferably high up; another cable goes to the tail of the machine

low down, thus suitably anchoring the tree or stump; a few strokes with the handle and the ropes are taut; continuing, the pull increases until the tree or stump comes right away. The advent of the "Monkey" Grubber meant the end of shovel and axe work where land clearing operations were necessary.

The opinion of a well known farmer is summed up as follows: "The 'Monkey' Grubber gave me the power of 260 pairs of hands in a simple and compact form. The short lever enables me to stand firm footed and get the full stroke. There are two speeds in the machine, whilst the automatic release allows me to let off a strain."

"As the machine will work in any position it comes in for all jobs that would require a chain block. It is simply taken to the job on a pair of wheels like a barn truck. Then it is rigged for work in a few minutes. The ropes are in lengths that I find easy to handle and each one is fitted with hook and loop couplings, simply operated and most effective. A sturdy snatch block with a novel method of securing to the ropes is an ingenious arrangement, as is also the firm gripping rope shortener which makes it very easy to accommodate the lengths of rope to the tree or stump being pulled."

IMPLEMENTS FOR LAND CLEARING

Tree and Stump Pulling

Review of the Operations of Trehwella Bros. Pty. Ltd., Trentham, Vic.

Trehwella Bros. have been in business in Victoria since 1889, and whilst the early period of their activities was devoted to the production of land clearing implements, latter years have seen further developments in their products of various classes of tools which, although not as closely associated with the land as the tree and stump pullers, have their uses on every farm and orchard. Space does not permit of a detailed description of all of these tools, but some of particular interest include wood-cased jacks and pinion jacks, sawyers' bench gauges, wedges, hydraulic and screw jacks, snatch blocks, rope fittings, hammers and logging dogs, etc.

Trehwella Bros. have always been ready and willing to place their services at the disposal of fruitgrowers in all States in an advisory capacity where there is a stump pulling job to attend to, and they have many appreciative letters from clients who have sought and followed their advice on tree clearing problems.

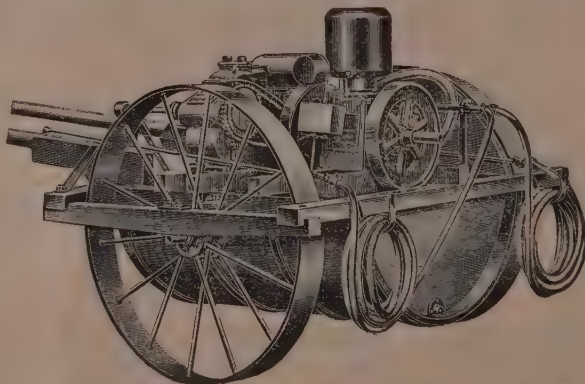
At the forthcoming Melbourne Royal Show to be held on September 19 to 28, Trehwella Bros. Pty. Ltd. will occupy their usual stand at 98 Smith-street. A cordial invitation is extended to all visitors to the show to inspect their land clearing implements and the other tools described above.



Getting the pull on a stump.

Mitchell Spray Plant with 3 H. P. Lister Engine

A HIGH GRADE COMBINATION IMPOSSIBLE TO BEAT



LISTER ENGINE—The world's most reliable power. Totally enclosed. Dirt cannot harm it. Vertical cylinder.

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CANNING AND JAM FRUITS

Australian Canned Fruit in U.K.

Co-operation With the British Distributing Trade — Australian Canned Peaches, Apricots and Pears Equal to the World's Best, But Red Centre in Some Peaches Regretted.

More Canned Pineapples Could be Absorbed.

By the Special Correspondent in London of the "Fruit World and Market Grower."

Optimism in Canned Fruit Circles.

WHEN I CALLED at the office of the Australian Canned Fruits Board, they were in good spirits, and justifiably so because they were able to quote optimistic figures and to recite a story of definite progress.

It appears the Board has very wisely adopted the policy of running hand-in-glove with the old-established English wholesale distributing houses. There are people in Australia, who, knowing nothing of the solid conservatism of this market, are all in favor of establishing machinery in London for cutting out the profits of the established distributing houses. Such an idea is excellent in theory, but in actual practice it would crash in flames, and the result would be chaos.

This the Board clearly sees. It does not bother about the sale of small lots. It is only interested in thousands of cases at a time, with very beneficial results to the Australian canners. When good machinery already exists, why not use it? Not to use it would be inviting a war from those who have been in command of the market for many decades.

Could Absorb More Pineapples.

Australian canned Peaches, Apricots and Pears are now acknowledged to be equal to anything coming to London. Pineapples have been added to the family since last year, and

I am informed that there has been a great improvement in the quality. London could actually do with more Australian canned Pineapples. Australian canners have realised the wisdom of canning Pineapples at the correct stage of maturity. The advice I have is that it would be well for Australian canners of Pineapples to go for the better quality market and to leave the cheaper demand alone.

Canned Pears coming from Australia are now admitted to be equal to any coming from any part of the globe. Apricots, on the other hand, are always variable, and always will be. At the moment they are not the popular fancy.

Judgment of Eye Rather than Taste.

On the subject of Peaches, it might be said that most buyers here rely on the judgment of their eye rather than on their taste, and they seem to like most the golden "Queen" variety. But with these the old trouble of "red centre" has cropped up again lately. Buyers do not like that long fibrous remainder which sometimes occurs. I am told that this is fully realised by Australian canners, who are now paying higher prices so that they can be assured of having only the very best of this class of Peach.

Canned Salads Various.

Australian canned fruit salads are variously regarded here. For this reason I understand that Passion-

fruit juice has been left out of the most recent shipments, because when the tin is opened, the juice gives both itself and the other component fruits of the salad a "messy" appearance—especially to those who have not had a previous acquaintance with Passionfruit. Cherries also, it is said, present an anaemic appearance in a salad unless they are artificially colored to give them the red hue beloved of cocktail parties. It is claimed that this artificial coloring does no harm to the flavor of the Cherry. I am inclined to doubt this. In my opinion a Cherry that has been artificially colored is leathery and juiceless.

MUSSOLINI'S PREPARATIONS ASSISTS CALIFORNIA'S EXPORTS.

Word comes from California that whereas Italy generally supplies most of France's requirements for Lemons, the former is conserving her Lemons to protect the health of Italian troops in Abyssinia, therefore she cannot supply the French market and orders are being placed for Californian Lemons.

FRUITS FOR SALADS.

A Line That Should Develop.

The preparation and processing of fruits ready for salads is increasing in volume every year in America. The product is gaining in popularity and should do so in Australia when the right varieties and processing are better known to consumers. There is no reason why this undeveloped section of the canning industry should not be greatly increased.

California, during 1934, sold 1,383,899 cases of such prepared fruit salads, an increase over the previous year of approximately

300,000 cases. During the summer months this form of tasty and easily prepared dessert should be popular and result in heavy sales if a good quality product was easily accessible.

CANNED FRUIT EXPORTS.

£43,000 For Bounty.

Australia's exports of canned fruits for the 1935 season are expected to be about 2,000,000 dozen cans, an increase of nearly 35 per cent. on the quantity exported last season. The total amount of bounty payable on the 1935 season's export pack, however, will not be more than £43,000, compared with £74,000 paid out last year, when the rate was 1/- a dozen 30-oz. cans.

The full bounties for the 1935 season's exports will be 5d. for Apricots, 6d. for Peaches, and 3d. for Pears, each of these amounts being for a dozen 30-oz. cans. The rates for a dozen 16-oz. cans will be half the foregoing amounts.

1935 CANNED FRUITS SEASON.

Most Successful for Years.

A report just received from London states that the selling of Australian canned fruits, now coming to a close for the present season, shows that it will be the most successful for many years. The receipts of Peaches, Apricots and Pears are expected to exceed a million cases. The report also states that the winter pack of choice Queensland Pineapples has been sold in advance.

SOMETHING TO WHINE ABOUT.

Bishop's Wife: I hope you enjoyed the service, James.

Chaffeur: Greatly indeed, thank you, but I had to leave before the Benediction.

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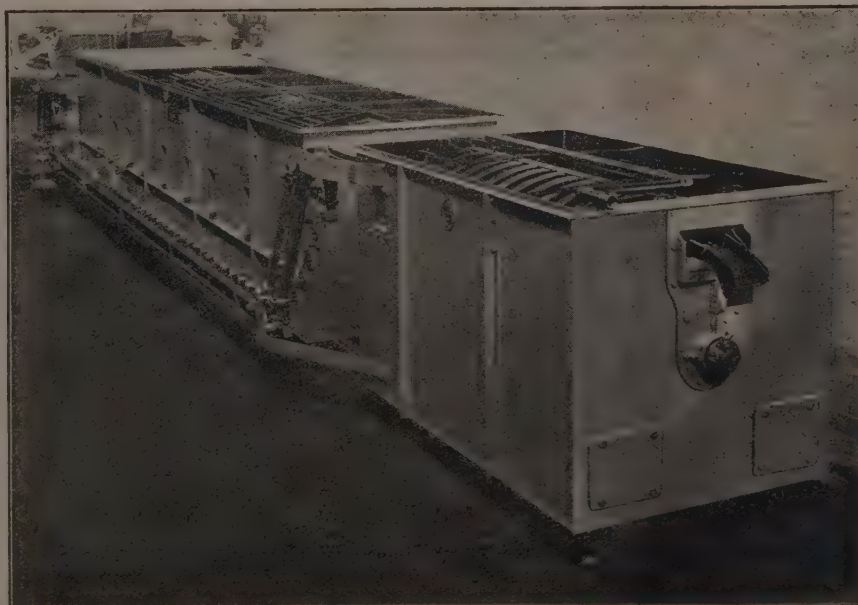
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Interstate News & Notes



VICTORIA.

PRIMARY PRODUCTS MARKETING BILL.

Division of Fruit Industry Into its Component Parts Desired, Also Voting on Acreage Basis — Unwieldy Consumers' Committees.

ALTHOUGH THE PRIMARY PRODUCTS MARKETING BILL passed all stages in the Victorian Legislative Assembly, considerable amendment is forecast when the Bill reaches the committee stage in the Legislative Council. More opposition developed in the Upper House than was anticipated, and it may be that the Bill will be defeated at the second reading. From the "counting of hands," however, it would appear that the Bill will reach the committee stage.

Following the Box Hill meeting on July 4, when the Minister for Agriculture (Mr. Hogan) addressed 300 growers, committee meetings have been held, and fruitgrowers have declined to accept the Minister's assurance that it will be safe to leave to the Governor-in-Council the decision as to taking a poll of particular sections of growers.

The request is definitely made that "fruit" should not be declared a product as such, but that each section should be treated separately,—thus Apples, Pears, citrus, berries, canning fruits, stone fruits, other soft fruits.

Apple growers state they have no desire to vote on the question of a board for, say, berries, citrus, canning fruits, etc., and that these sections should be definitely set out independently in the Act. Why not?

The addition of the few words which would make the position clear would be quite simple, and would set the minds of growers at rest in this connection.

Another objection raised by growers is the provision in the Bill for voting to create a board. The Bill provides for the creation of a board

if 55 per cent. of the votes polled favor it, if three-fifths of the producers have voted. Fruitgrowers ask that the required majority be 60 per cent. of the growers on the roll,—seeing that voting is compulsory.

The refusal of Mr. Hogan to define the sections of the industry has brought the inevitable reaction, and now many growers, instead of being apathetic, are actually fighting the whole Bill.

The Southern Victoria fruit growers are urging that fruit be excluded from the Bill, alternatively that plural voting be permitted (as with wool and eggs), thus 1-5 acres one vote, 5-20 acres 2 votes, over 20 acres 3 votes.

The United Berry Growers' Association is opposed to the Marketing Bill.

Other sections are quite emphatic in urging the Legislative Council to define the various sections of the industry in the Bill.

The principal objection to the Bill is the fact that the board, when created, compulsorily acquires all the grower's produce—the products are completely divested from the growers and vested in the board as the owner thereof.

Conferences were recently held between growers representatives and members of the Legislative Council.

The Hon. W. J. Williamson, M.L.C., of Portland, stated that whilst believing in organisation—even compulsory organisation—of fruitgrowers, he was opposed to sweeping powers of a board, in which all the fruit was completely vested. Also, he saw no necessity for the in-

clusion of a Government nominee on a producers' board. Growers were quite capable of electing their own representatives, and as they were paying for it, no Government nominee was desired. He would oppose the Bill as at present drafted. He would like to see, however, some less drastic provisions, for instance, the organisation of growers in their various districts, financed by means of an orchard tax, thus providing for better distribution of fruit in Victoria and to interstate markets.

:: :: :: ::

It was admittedly difficult, stated Mr. Williamson, to see how these suggested provisions could be incorporated into the present Bill, the whole tenor of which was compulsory acquisition of produce. However, he asks growers to note his suggestions for organisation.

Consumers' Committees Compulsory.

An amendment to the Bill as originally drafted was included during the passage of the Bill in the Legislative Assembly.

It is now mandatory to appoint a consumers' committee of five persons (without payment) charged with the duty of reporting to the Minister on (a) the effect of the operations of any marketing board upon the supply and distribution of any commodity; (b) the price of the commodity to the consumers; (c) any bona fide complaints as to the effect of the operations of the board on consumers.

:: :: :: ::

One has to mentally picture a board meeting consisting of:—

Four fruitgrowers,

One Government nominee,

Five consumers' representatives to realise that an absurd situation would be created.

Probably six of the above would receive a liberal education on fruit production and distribution, but as to how far producers would benefit would be better left to the imagination.

SPRAY HOSE

**BURST PROOF
ALL RED**

HAND-MADE

BY

**HARDIE
RUBBER
CO. LTD.**

"EVERY INCH AUSTRALIAN"

Obtainable at All Stores.

VICTORIAN FRUIT MARKETING ASSOCIATION.

At the August meeting of the V.F.M.A., Mr. G. W. Brown presiding, it was decided to request that the Apple varieties Alexander, Aromatic and Wellington be deleted from the export list, and that Rokewood and Shroeder be transferred to the dual purpose section; other items for the Apple and Pear Export Conference at Hobart included — necessity for reduction of freight of Pears in standard Pear case; that all fruit shipped under permit be subject to inspection at the port of shipment; that all Pears exported from Australia should be precooled.

Resolutions were also carried "That drinks purporting to be fruit drinks but which are not prepared from actual fruit should be labelled "imitation."

That Apples and all large fruits should be sold by the count, not by weight.

It was decided to press for the amendments already decided upon in the Marketing Bill.

FIELD DAY AT PANTON HILLS.

Re-working Demonstration on
October 1.

Under the auspices of the Pantan Hills and District Fruitgrowers' Association, the Victorian Fruit Marketing Association, a field day will be held at the orchard of Mr. S. A. Cracknell, Alma-road, Pantan Hills, on Tuesday, October 1.

There will be demonstrations of re-working fruit trees by officers of the Department of Agriculture, and there will also be a lecture in the local hall the same evening.

The President of the Pantan Hills Association is Mr. S. A. Cracknell; Vice-President, Mr. A. G. Duff, and the Honorary Secretary, Mr. C. T. Harris.

VINEYARDS IN VICTORIA.

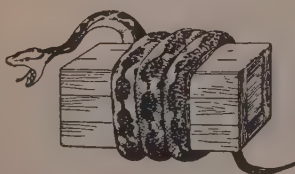
Area Extended.

Vines Must be on Phylloxera Resistant Stocks.

A PROCLAMATION issued by the Executive Council early in August under the Vegetation and Vine Diseases Act declares as vine disease districts the parishes of Boosey, Katamatite, Naringaningalook, Katunga, Stratmerton, Yarroweyah and Cobram.

The State Viticulturist (Mr. F. de Castella) states that the effect of the new ruling was that vines could now be grown in these districts. They would have to be obtained from the State nurseries at Rutherglen and Wahgunyah, where disease-resisting stock was raised.

PYTHON



Latest Electric Machine Mounted as a Complete Mobile Unit

EFFICIENCY The machine is automatic, giving a uniformity of tension with every wire straight around the case: thus each wire carries an equal proportion of the load. No loose wires irrespective of the operators.

SPEED — Ties from 400 to 600 wires per hour.

ECONOMY The low cost of wire. The small off-cut or waste of wire, which is 1½ inches and which cannot be varied however loosely the wire is placed round the case.

The complete unit will be leased at a low annual rental which embodies service and maintenance, with no tags as to the purchase of wire.

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Phone: MA 4392. CHIPPENDALE, SYDNEY

South Australian Agents: **GOLLIN & CO. PTY. LTD.**, 110 North Terrace, Adelaide.

SOUTHERN (Victoria) FRUIT-GROWERS' ASSOCIATION

Black Spot Experiments to be Continued—Dump Case Favored in Place of Long Bushel for Local Trade — Sales of Fruit by Count Instead of Weight Advocated — Strong Opposition to Marketing Bill — Request for Fruit Industry to be Excluded.

A MEETING of the Executive of the Southern (Victoria) Fruit-growers' Association was held at Box Hill on August 2, 1935. There were present Messrs. F. G. Beet (president), O. White, F. C. Pyke, E. Noonan, L. Webb, L. Peppereli, W. A. Thiele, and the secretary (J. W. Aspinall).

The president extended a cordial welcome to new members, Messrs L. Webb and E. Noonan.

Codlin Moth Experiments.

The Department of Agriculture wrote in response to resolution from annual meeting that experiments for the control of Codlin Moth with means other than arsenate of lead were in progress and would be continued.

Dump v. Long Bushel.

The Doncaster Association wrote stating they were in favor of a gradual change over from the long bushel case to the dump case for hard fruits packed to the water level.

It was resolved to support the Doncaster recommendation, also to request the Governor-in-Council to bring in regulations for all fruits where practicable to be sold by count.

Market Gardeners' Association.

The president reported having attended with the secretary the annual meeting of the Market Gardeners' Association on August 1, when several matters re marketing had been discussed.

Mr. J. P. Cowey wrote thanking the association for assistance in obtaining more shed accommodation at Victoria Market and forwarding annual subscription.

The secretary, Horticultural Research Committee, advised that expenses totalling £2/12/- were incurred in reference to recent deputation. Four associations were responsible for payment. Decided that 13/- be passed for payment.

Mr. R. M. Minlay wrote stating that owing to distance he would like to be relieved from office. Reply left with secretary.

Black Spot Experiments.

Mr. J. Brake, Supt. of Agriculture, advised that the Department would be pleased to continue Black Spot experiments at Doncaster and approved of the change to Mr. W. A. Thiele's orchard, on the lines previously conducted at Mr. Leber's orchard.

Alteration to Constitution.

The Doncaster Association wrote requesting that the constitution be reviewed to provide for voting power in proportion to affiliation fees paid. Deferred for next meeting.

Marketing Bill Opposed.

Copy of letter from Minister of Agriculture re amendments proposed by recent conference of Fruitgrowers' Association was read. A lengthy discussion followed. It was finally resolved:

"That having heard the Minister for Agriculture (Mr. Hogan) explain the Marketing Bill and having received his reply in regard to the amendments submitted to him this Association strongly disapproves of the Bill and requests that the fruit industry be removed from the Marketing Bill now before the House."

"That in the event of the Marketing Bill being passed, this Association strongly recommends that voting be on an acreage basis with a maximum of three votes."

It was resolved to advise the press and members of Parliament of these decisions.

Votes of Thanks.

It was resolved that letters of appreciation be forwarded to Messrs. V. Lawford and G. Fankhauser for work and assistance whilst members of the Executive, also to Mr. W. A. Webb, who in the past has given much valued assistance to the industry.

It was further resolved to make Mr. W. A. Webb a Life Member of the Southern Fruitgrowers' Association.

Field Day at Vermont.

Mr. Beet reported that a Field Day would be held at his orchard, Railway-road, Vermont, on September 5, at 2 p.m.

CITRUS CROPS DAMAGED.

Some Black Spot Infestation.

Black spot, made worse by the continuous wet weather early in August, has done much damage in citrus orchards of Bamawm, Lockington, Ballendella, and Nanneela, where growers say they have lost up to half their fruit crop.

The disease has attacked not only Oranges, which, in spite of spraying, are not immune, but Lemons and Grapefruit.

It is believed that only fine weather can save the fruit.

AN APPRECIATION.

Sir,—We have just received a copy of the August issue of "Fruit World" and we consider the new size a great improvement. — (Signed) International Harvester Co. of Aust. Pty. Ltd. (9/8/35).

Bairnsdale Orchard FOR SALE

Situated less than three miles from town, comprising 30 acres of splendid river flats alongside Mitchell River. 3,500 trees, mostly full bearing, approx. 2,300 Yates, 500 Jonathan, balance Rokewood, Granny Smith and Pears. Clean and in splendid order, with excellent prospects for next season's crop.

Further particulars from

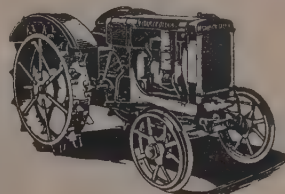
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McCormick-Deering O-12 Tractor.

B-7 TRACTOR MOULDBOARD PLOUGHS.

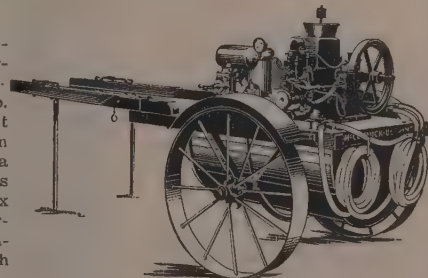
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McCormick-Deering Two-Wheel Power Sprayer.



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Top: Pakenham Field Day. A group of some of those present.
Lower: Mr. Norman McKay explaining points of the detachable "Sunshine" spraying outfit.

New South Wales.

CROP CONDITIONS AND CROP PROSPECTS.

Pome and Stone Fruits Budding Nicely — Frosts in Coastal Citrus Areas — Light Crop of Valencias on M.I.A. — Frost Damage in Some Banana Districts.

IN THE MONTHLY REPORT of the N.S.W. Dept. of Agriculture, received on August 12, the following is stated:—

Pome and Stone Fruits.

At this early stage, the budding of both pome and stone fruit trees appears to be very satisfactory in most inland areas.

In the Bathurst district, the general indications point to light to medium crops, although in odd orchards where trees for the most part are young, the prospects are stated to be good. Around Young, Jonathan, Rome Beauty, Cleopatra, and Delicious are budding well, but Granny Smiths are likely to be patchy.

Cherries are showing good bud development at Orange and Young;

in the latter centre Eagle, Florence and St. Margaret are the outstanding varieties.

On the Murrumbidgee Irrigation Area, Apples, Pears and Stone fruits are budding well and prospects appear very favourable.

In the Coastal areas, some of the early Stone fruits, e.g. Apricots and Peaches, are now blooming; generally the outlook appears to be good, although in some orchards the bloom is shedding freely and weather conditions are adverse to good settings of fruit. In the Parramatta district, the bloom of early Peaches is about two weeks later than that of last season.

Citrus (Coastal).

The very severe frosts experienced throughout the month caused dam-

age to trees and extensive losses of fruit. Fruit is still falling freely in the Hawkesbury district and it is reported that probably 10,000 bushels will be lost. One hundred and fifty young Navel trees were destroyed in one grove despite the fact that they were covered.

At Kurrajong, more particularly in the Colo portion of the district, losses of fruit were heavy.

A heavy fall of Common Oranges is taking place in the Windsor centre and other varieties are damaged by frost, a large percentage of the Valencia crop being affected. It is reported that most Lemons have been damaged and the summer crop completely destroyed. In other districts varying losses were sustained. Generally the bulk of the Navel crop has been harvested, although at Wyong about 50 per cent. remains on the trees. Development in Valencias is lacking, most of the fruit being small but a few lots have been exported. Sevilles are being marketed and are said to be meeting ready sale.

The Lemon crop is heavy at Gosford and medium to good at Kurrajong, but in other districts the trees are not carrying much fruit. With regard to Mandarins, there are large

N.S.W. ORANGES FOR EXPORT.

N.Z. Embargo Should Be Lifted.

While New Zealand is definitely short of Oranges, there are ample in N.S.W. awaiting shipment.

The lifting of the N.Z. embargo is being earnestly sought. The trade is worth while for both countries.

Instead of waiting for Sir Henry Gullett to attend and report, a Minister now in Australia should be sent to N.Z. to finalise matters.

quantities of small sizes available, but there is practically no sale for this type of fruit.

The budding indications in the Wyong district appear to be very promising for most citrus fruits.

Generally a good soaking fall of rain would be of great benefit to all groves.

Murrumbidgee Irrigation Area.

Marketing of Navels is in full swing, about sixty per cent. of the crop having been harvested in the Leeton district.

The light crop of Valencias in sight is stated to be developing very satisfactorily and good quality fruit should result.

Some export of Mediterranean Sweet Oranges and Lemons has been carried out. Damage to Lemon crops by frosts is apparent throughout the Area.

Bananas.

Heavy frosts occurred throughout the growing areas and damage is reported, more particularly in plantations on low lying lands; it is stated that many acres were destroyed in the Murwillumbah district.

Growth was retarded by the cold weather, but despite this setback, supplies of fruit are expected to increase in most districts during August.

At Brunswick, bunches are said to have developed four to six inches weeks earlier when compared with last season. Plantations which were established around Lismore during the 1933-34 season are now coming into full bearing.

Citrus for New Zealand.

N.S.W. Citrus Men Interview the N.Z. Prime Minister.

During his recent visit to Sydney the Prime Minister of N.Z. (Mr. Forbes) was interviewed by representatives of the N.S.W. citrus industry, particularly with regard to the early lifting of the N.Z. embargo on N.S.W. citrus fruit.

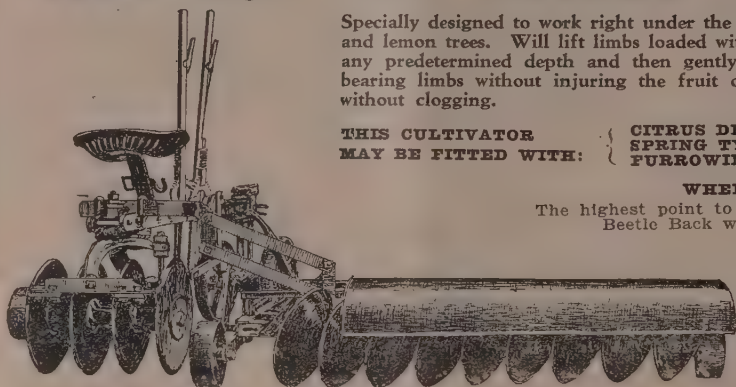
Mr. J. Heane (president N.S.W. Fruitgrowers' Federation) spoke of the many years in which N.S.W. Oranges had been sent to New Zealand with satisfaction to all concerned, and expressing a desire to facilitate negotiations for a renewal of the trade.

Mr. P. S. Macdermott said that substantial quantities of N.S.W. Oranges were available for shipment to N.Z., which would be appreciated by the N.Z. public.

In reply, Mr. Forbes said the whole matter was being dealt with by responsible Ministers of the two Governments. At the moment he could not indicate what headway was being made.

Eastwood: A Fruitgrowers' Association has been formed in this district. Mr. H. Heard, of North Ryde, has been elected president.

"Harvey" BEETLE BACK Citrus Cultivator



The "Harvey" Beetle Back Citrus Cultivator fitted with Disc Attachment with Beetle Back Hood.

The Orchard Completely Plowed Out "Petty" Wonder Plow in One Operation by the . . .

Neglected centre strips, no matter how hard or how long unworked, or how much couch grass, plowed out with ease.

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Works equally well with either Horses or Tractor.

Works just as efficiently on the hillside or undulating country as on flat land.

Made in 2 & 3 furrow discs.

The "PETTY" Plow can be converted into a one-way reversible disc cultivator with 5, 6 or 7 plates. Also into an irrigation furrower of 2 or 3 furrows or a spring tyne cultivator.

Specially designed to work right under the limbs up to the trunks of the orange and lemon trees. Will lift limbs loaded with fruit off the ground, cultivating to any predetermined depth and then gently putting back in position the fruit-bearing limbs without injuring the fruit or fibrous roots. Cuts out all weeds without clogging.

THIS CULTIVATOR MAY BE FITTED WITH: { CITRUS DISC ATTACHMENT WITH HOOD. SPRING TYNE ATTACHMENT WITH HOOD. FURROWING ATTACHMENT WITH HOOD.

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The highest point to which the limbs are lifted by the Beetle Back would be less than 12 inches.

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Proposed Fruit Marketing Organisation Act in N.S.W.

Premier Declines to Introduce the Legislation.

States the Present Primary Products Marketing Act is Sufficient.

(By Our N.S.W. Correspondent.)

AFTER CONSIDERATION by the Government, the draft of the N.S.W. Fruit Marketing Organisation Bill presented by the Fruitgrowers' Federation, was rejected.

The Bill, in its present form, said Mr. Stevens, was not acceptable to Cabinet. The Government, in accordance with its policy, supported the principle of marketing outlined in the Marketing of Primary Products Act, which gave the right to demand a poll before any marketing organisation was established.

The Minister for Agriculture had had been asked by Cabinet to convey this decision to the Fruitgrowers' Federation and to suggest to that organisation that they should reconsider their proposals in the light of the Government's policy.

Opposition to the Bill by the N.S.W. Citrus Growers Defence Association and other fruit-growing bodies has been very pronounced during recent weeks, and letters from growers objecting to the proposed control of the industry have been appearing in the daily press.

Many writers claim that the powers sought by the N.S.W. Fruitgrowers' Federation are too wide and too dangerous to meet with the approval of growers generally. In a letter to the Sydney "Morning Herald," Mr. Eric N. Birks, State president of the N.S.W. Citrus-growers' Defence Association, writes:—

"Were the threat of Government control of the fruit industry still not so imminent and politically grave,

there would be an element of humor in the latest emasculatation of their Bill by the authors—the directors of the Fruitgrowers' Federation.

"Once again these directors have changed their minds by deleting clauses 24-32, by adding a bit here and subtracting somewhere else; once again acting without reference to their delegates or their members.

"Will recent history again repeat itself? Will the Federation delegates repudiate the proposal in its latest form, and will members of the Federation again refuse it wherever it is offered to them?"

"Be the answers to those questions what they may, what is definite is that the citrus growers will not accept the proposed Bill, even were its latest dress virginal instead of resembling Jacob's fruity coat of many colors! And the reason is not far to seek.

"The powers sought are still too wide, too dangerous and too easy of introduction, without any suggestion of a vote. For instance, Clause 41 still stands: under it regulations by the score may be made, until the regulations exceed in severity anything written in the proposal.

"The proposal is still one of 'grower beware,' instead of 'grower control.'

"Is it conceivable that a body which cannot draft its own intentions in a form acceptable to its own circle can ever administer any proposal with satisfaction to a far-flung, important industry, which does not desire restrictive control of marketing?"

Proposed Fruit Marketing Legislation

Opposition at Lisarow, Eastwood.

Lisarow Withdraws from Federation.

Proposed Act Defended by Mr. T. A. Tester.

Lisarow. — At a duly convened meeting of the Lisarow Fruitgrowers' Association on August 7, Mr. R. Hill presiding, it was unanimously decided to withdraw from affiliation with the Fruitgrowers' Federation of N.S.W. Several speakers stated that they were not satisfied with the work of the Federation and the idea of withdrawing was to dissociate themselves with the sponsors of the proposed Fruit Marketing Organisation Act.

Eastwood.—On August 7 there was a well attended meeting of growers from Eastwood, North Ryde, Carlingford, and Dunedun districts.

There was unanimous opposition to the proposed Fruit Marketing legislation, and it was decided to oppose the measure should it be introduced into Parliament.

SPIRITED DEFENCE BY MR. TESTER.

Mr. T. A. Tester, of Young, a member of the Board of the Fruitgrowers' Federation, writes to the "Sydney Morning Herald" as follows:—

Certain salient features connected with the above are overlooked, misinterpreted, and misunderstood.

The suggested Act is a machinery or organisation Act, and in no sense can be construed as so-called socialistic legislation. It is designed

to place in the hands of the grower—and no other party—the conduct of his own affairs. No decision can be given effect to unless it is the desire of the sectional committee elected by the section concerned.

The big body of growers who have carried the responsibility of the growers' affairs for many years have constantly demanded reorganisation of the Fruitgrowers' Federation on sectional lines, i.e., that citrus growers should control citrus, Apple growers to legislate in respect of Apples, and so on. The proposed Act will substitute sectional committees for committees elected on a district basis. The sectional committees will be elected by the growers interested in the sections.

The proposals provide for sectional committees (appointed by growers), determining and carrying out the policy of the section in the name of the Federation. There could be nothing more democratic than that. Each sectional committee will elect one representative to the Board of the Federation (citrus section two representatives). The Board will consist of six instead of 12, as at present.

Should a sectional committee (elected by growers) decide that a certain decision shall be given effect to, the Board will issue a direction. It is clear that nothing of this nature can be done unless the growers,

FRUIT FLY IN N.S.W.

IN ITS VIGOROUS CAMPAIGN to combat the fruit fly the N.S.W. Department of Agriculture has utilised the press, the radio, and even by instructing children through school papers and posters; 10,000 leaflets were distributed to backyard orchardists.

Over 450 prosecutions have been launched, and many thousands of trees destroyed. In one district alone, after repeated warnings, 5,000 trees were destroyed in three months.

through their representatives, determine to request it. Even then ample provision is made to enable a poll to be taken on any question, although the decision is made by growers' representatives. Opposition expressed to the two main features of the Act covered above is without real foundation, and arises from distrust, suspicion, and ignorance.

I note the existence of a so-called Citrus Defence Association. It is beating the air at present, but may I suggest its retention, because when Palestine, which is already flooding Europe with citrus, and that flood increased to 20-26 million bushels, there will be as great a demand for protection and the provisions of suitable machinery to cope with the local position as there is at present ignorance of the subject.

The fruit industry has had the service of many self-sacrificing growers in the past, and the Federation has been comprised of, and elected from, the many growers who have interested themselves in the multitudinous questions that can only be attended to by such a body because there is no other authority to deal with these matters. It is unfortunate that the many individualists who have been writing have not shown the same concern (for the bulk of the growers), otherwise they would have known the futility of their remarks.

Despite ill-advised opposition, the fruitgrowers must be given control of their own affairs, and no better solution offers than the proposed Act. Anyhow, citrus growers can rest assured that there is not enough insanity, even amongst fruitgrowers, to warrant the suggestion that any proposal to take control of citrus would even be thought of. The body that prepared the draft Act and the annual conference in June can be accused of no other form of insanity than that they are endeavoring to improve the condition of the industry generally.

Bathurst.—At a recent meeting of the Bathurst Fruitgrowers' Association the proposed Fruit Marketing Organisation Bill was discussed at length.

A resolution was carried expressing appreciation for the sound accomplishments of the Fruitgrowers' Federation of N.S.W., and conveying a vote of confidence in the board.

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Liverpool.—About 100 growers attended a meeting convened by the Liverpool and District Fruitgrowers' Association in mid-August. Mr. A. S. Brown, of Ourimbah, who recently went to Queensland to study fruit marketing legislation and organisation, delivered a vigorous address, and gave details of the proposed Fruit Marketing Organisation Bill. A resolution was carried in favor of the proposed Act, and expressing confidence in the Fruitgrowers' Federation. A hearty vote of thanks to Mr. Brown was carried.

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Moorland. — A special meeting of fruitgrowers was convened at Moorland to hear particulars of the proposed fruit marketing legislation. A resolution was moved and seconded as follows:—

That this meeting of fruitgrowers of Moorland and district emphatically protests against the introduction of the proposed Fruit Marketing Bill, as we believe the Bill on the whole is not in the best interests of fruitgrowers throughout the whole State of N.S.W.

After debate the resolution was carried with one dissentient. It was further decided to convey this resolution to the Minister for Agriculture and other members of the Cabinet.

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GRAPEFRUIT, Etc.

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N.S.W. FRUITGROWERS' FEDERATION

A meeting of the board of the Fruitgrowers' Federation of N.S.W. was held in Sydney, on August 15 and 16.

There were present Messrs. J. Heane (in the chair), A. U. Tonking (Orange), T. A. Tester (Young), E. Ray (Bathurst), A. E. Herring (Bathurst), J. Hetherington (Leeton), K. H. Todd (Griffith), F. B. Mackenzie (Kurrajong), H. C. Matheson (Grose Wold), A. J. Taylor (Warkworth), S. C. Martyn (Armidale), A. S. Brown (Ourimbah), A. E. Lillicrapp (Mangrove Mountain), P. W. James (Dural), T. A. Haerse (Liverpool), L. T. Pearce (Market Representative), and E. E. Herrod (Secretary).

New Zealand Embargo.

The president reported that a deputation comprised of representatives of the N.S.W. Chamber of Fruit and Vegetable Industries and the Fruitgrowers' Federation, waited upon Mr. Forbes, the Prime Minister of New Zealand, and stated the case for the readmission of N.S.W. fruit into New Zealand. Mr. Forbes' reply was to the effect that the matter was under consideration, and was in the hands of responsible Ministers of the Dominion.

Co-operative Bud Selection Society.

Messrs. J. Heane, H. G. Such, H. S. Robinson, F. B. Mackenzie and A. S. Brown were recommended for appointment as the Federation's representatives on the board of this society.

N.S.W. Chamber of Fruit and Vegetable Industries.

A suggestion was received from the above chamber inviting a committee of the Federation to confer in respect to several matters of mutual interest, including City Markets and the Farm Produce Agents' Act. The board considered this expedient, and decided to meet the organisation.

Citrus Grading Regulations.

Correspondence from the Department of Commerce was reviewed suggesting that the grade names of export Oranges be altered from "Special" and "Standard" to "Extra Fancy" and "Fancy." The board decided, that in view of foreign competitors mostly relying upon certain labels to express the respective grades, that an alteration was inadvisable at present.



Growers watching Pruning demonstration at the recent Pakenham (Vic.) Field Day.

Australian Citrus Advisory Council.

The president reported that the secretary had prepared a draft constitution, which had been submitted to the official representatives of the council in Victoria and South Australia, and was undergoing consideration.

It was decided that the president and Mr. A. S. Brown attend a meeting of interstate delegates in Melbourne, and that consideration of levies at that meeting be referred back to the board of the Federation.

Proposed Fruit Marketing Organisation Act.

In view of the apparent opposition in the industry to certain sections of the proposed Act, and because certain powers selected from the Marketing of Primary Products Act are superfluous to the intent of the proposed Act, it was decided that the sections of the Act relating to the vesting of fruit in the board of the proposed organisation should be eliminated, and that Section 23 be amended so that it will be understood that possessive powers are not intended.

At the conclusion of the meeting a deputation appointed by the board waited on the Premier, and advised him of the alterations suggested by the board.

The Premier informed the deputation that the matter would be reviewed at the first available opportunity.

BANANA MARKETING IN N.S.W.

New Board Elected.

Surprise at Non-Election of Mr. Anthony.

One of the surprises at the recent election for members of the Banana Marketing Board under the Primary Products Marketing Act was the non-

election of Mr. H. L. Anthony, who has been prominent for many years as President of the Banana Growers' Federation of N.S.W.

Members of the Board were elected as follows:— (No. 1 district), Messrs. H. A. A. Stevenson and F. W. Stuart; (No. 2 district), Mr. E. L. Steel; (No. 3 district), Mr. T. M. Ronan; (No. 4 district), Mr. J. J. Murphy.

Another surprise was the number of informal votes, particularly from persons who returned ballot papers, but whose Christian names, as stated did not agree with the names on roll. In one district these informal votes totalled 24 per cent. of the poll—for the whole election, invalid votes averaged 13 per cent.

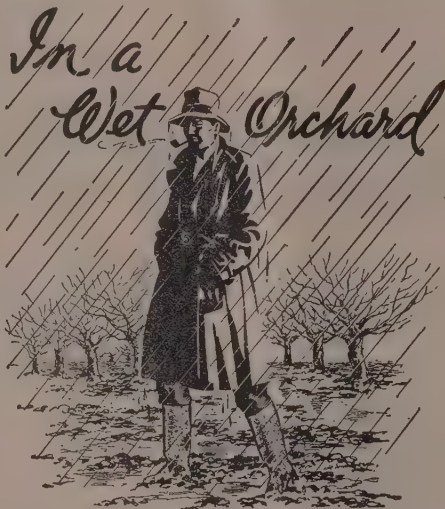
N.S.W. BANANA BOARD.

Mr. Anthony Declines Appointment As Government Nominee.

At the recent election of members of the N.S.W. Banana Board, surprise was created at the non-election of Mr. H. L. Anthony, who, as president of the Banana Growers' Federation, has rendered much service to the industry.

The N.S.W. Government then decided to offer Mr. Anthony the position of Government nominee on the board.

Whilst appreciating this offer, Mr. Anthony stated that after full consideration he felt he should decline, as naturally he was keenly disappointed that after years of service to the industry the growers should have turned him down. He accepted the verdict of the growers, and did not desire to be on the board by any other means than election. He would, however, resubmit his name for election as president of the Banana Growers' Federation.



A Friend in Need is— SULPHATE OF AMMONIA

When the soil is wet and sodden in the Spring, the burst into life of plants is delayed and weakened because of a shortage of available Nitrogen. This is lacking either because it has been washed out or because the soil bacteria, which usually liberate it from organic matter or fix it from the air, are inactive on account of the wet and cold conditions.

Sulphate of Ammonia provides readily available Nitrogen at lowest possible cost.

It must be applied Now!

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SOUTH AUSTRALIA.

MID-MURRAY NOTES.

Winter Irrigation for Soil Moisture and for Developing Cover Crops — Prize for Best Cover Crop Matured by July 20 — Successful Methods Described — Cover Crops Lower Water Table and Prevent Water Logging — Effect of Frosts and Sunlight on Growth—Importance of Early Manuring—Tests With Potash.

(By Our Special Correspondent.)

THE FIRST IRRIGATION of the season commenced at the end of July, and is now nearing completion. Having an irrigation during the winter is a practice which has developed in recent years following investigations on soil moisture and the requirements of the vine.

Coupled with these investigations is the extension in cover crop plantings, and these cover crops require irrigating in the winter time to enable them to be ploughed under at the proper time.

Although the growing of cover crops has increased year by year, we are still in need of definite information regarding the best results to be obtained from them. In the field of investigation, followed by field practices by practical men, some interesting results have been obtained this year, showing the influence of early planting of Beans.

In past years it was considered that Peas, because of their continued growing habits in the winter time, showed some advantage over Beans as a cover crop. This year, however, it has been clearly demonstrated that if Beans are planted during March, kept moist by subsequent irrigation, they can be grown to a height of 6 feet by July 20. The bulk matter of Beans far outweighs any slight advantage Peas may have in their immunity from attacks of black aphid.

When Beans are planted in March and have the advantage of a month of warm weather to force them on apace, they become vigorous enough to be only partially affected by attacks of the aphid, but if planted later on, winter growth is slow, and aphid then becomes a nuisance.

The Block E branch of the Agricultural Bureau, realising the advantage of growing cover crops to enrich the soil, gives a trophy each year to the grower who can mature the best cover crop by July 20. This year's trophy was won by Mr. "Bill" Giles, whose methods of planting are rather unique, and are worthy of mention.

Sitting on a cultivator, with a bin of seed before him, Mr. Giles sows by hand and cultivates it under in one operation. Following the seeding operation, he then spreads the superphosphate in the same way. Furrowing out with the bursters on the cultivator—instead of tynes—is done while spreading the super.

Our winter has been a dry one, and our irrigation authorities, realising that cover crops are an important factor in enriching the soil, legislate for more frequent irrigations than before the practice became established. Mr. Giles gave his cover crop three irrigations, and the Beans were 6 feet high when judged on July 20.

On some properties, where growers did not take the "special" irrigations (available at an extra cost over and above the summer series of seasonal irrigations), Beans have not matured satisfactorily, and although there is remarkably good growth following the present irrigation, they are seldom of a uniform height above four feet.

Another important factor in the growing of winter cover crops is the plant's ability to lower a water table, owing to its capacity for absorbing large quantities of water from a soil which is in danger of becoming water logged.

In making comparisons between the virtues of Peas and Beans, the writer has found that Beans will grow on a more saline soil than Peas. One block planted with alternate rows of Peas and Beans, having a soil with a high salt concentration, shows Beans with a very satisfactory growth, but Peas have failed dismally.

Peas and Beans should not be allowed to grow after the full flowering period, as at this stage the maximum benefit is attained, and if ploughed under at that time, the full advantage of the nitrogen content can be utilised.

There is another factor, however, which comes up for consideration, and that is whether the cover crop is to be used as a dewatering agent, for instance, where a high water table is in evidence. In this case it has to be decided whether to allow the crop to pass its maximum nitrogen content in order to lower the water table, and in my opinion it is far more important to

lower the water table than to lose some of the nitrogen. Nitrogen can be applied artificially, but lowering a water table artificially is both costly and perhaps unnecessary if a cover crop is handled intelligently.

The organic matter in a full crop of beans is considerable, and even if allowed to grow past maturity, will act as a soil corrective, being subsequently converted into humus.

While Pruning Sultanias this year, the general unsatisfactory condition of canes has been very noticeable, this is particularly the case where frost damage occurred during last spring. Evidently the check received has given the vines a severe shock from which they did not recover throughout the following growing period.

Importance of Sunlight.

Even with vines not affected by frost damage, the canes are sub-nor-

mal, excepting on well nourished and fertile soils. It has been one of those years when insufficient bright sunlight late in the season has retarded the seasonal growth and the vine has been unable to mature its crop, and at the same time form sufficient carbo hydrates in the canes to fully mature them.

This condition is known to botanists as photosynthesis, and although forming only a minor function in bringing about the maturity of the crop hanging on the vines, it is my belief that it plays an important part when the vine is called upon to mature the crop and at the same time provide sufficient carbon forming substance for the proper maturation of canes as well. The average man on the land often looks askance at our scientists when they talk in technical terms, and may wonder what the devil its all about, but on going into the matter, we find that the process of root action working in combination with the rays of the sun, sets up a complex system of sap elaboration, transforming one chemical into another, each wholly dependent upon the other, so that

the lay mind looks in wonder at nature's works.

It is only by looking beneath the surface and studying the whys and wherefores of plant life that we get a real knowledge of the plants we grow to be better able to treat them with human understanding.

Mr. David Case, of the Pacific Potash Co. called to see me recently regarding a potash test carried out here last year, and, in the course of conversation, put a new light on the application of potassic fertilisers. It is generally believed among growers that potash is a quick acting fertiliser, but according to Mr. Case this is not so. My application was made during late September last year, which he considered too late to be of any use for that season, but would be availed of by this season's growth and production.

All plant foods must be absorbed during the first six weeks of growth—was Mr. Case's contention—to be of any use for the same season's availability, and it is therefore imperative for fertilisers to be put in early, so that the roots can absorb them and send them up through the

Orchardists ! ORGANITE Fertilizer

Used in Great Britain, U.S.A., and on the Continent for more than 30 years.

Nitrogenous - Phosphatic - Rich in Humus

"ORGANITE" is a general purpose fertilizer which is new to Australia. It is exceptionally rich in Humus, and it contains Nitrogen and Phosphoric Acid. In "ORGANITE" the Nitrogen is in two forms, the inorganic form, which is immediately available for the use of the plant, and the organic form, which will last for years in the soil, forming a continuous supply of rich plant food.

Price and full particulars:

Manufactured by **ORGANITE Pty. Ltd.**
Telephone: J 2705. 444-450 SMITH ST., COLLINGWOOD, VICTORIA.

For 75 Years... The National Bank has assisted Farmers and Graziers to develop their properties



From the early days of land settlement, the financial services of the National Bank have been actively associated with the progress of Australian land industries. Money lent through its branches has been used to improve farms and orchards and grazing runs, and increase rural production. Toward the marketing of rural products the Bank has provided full financial facilities for local and overseas trade.

To-day, its great resources and wide facilities are fully available to assist farmers and graziers to expand production and to sell their products on local and world markets.

THE
NATIONAL BANK
OF AUSTRALASIA LIMITED

Assets exceed £47,000,000

sap system. Potash and superphosphate must be put down deep, where the roots are, but nitrogenous manures need not be put down so deep.

Very little potash is being used in these parts and Mr. Case has laid down

three experimental plots in co-operation with local growers, with a view to convincing vine and tree growers of its practical utility. These experiments will be carried out for a period of three years, and in laying down these potash experiments, Mr. Case has been careful to see that the plots are supplied with a yearly crop of legumes, and that a balance of other plant foods are also available. At the end of three years he hopes to have something definite on the matter.—"Nemo." Renmark, S.A., 15/8/35.

South Australian Fruit Marketing Association.

The monthly meeting of the executive of the S.A.F.M.A. was held at Adelaide on July 26.

There were present: Messrs. H. J. Bishop (chairman), J. S. Hammat, R. G. Hannaford, F. B. James, H. N. Wicks, M. G. Basey, J. B. Randell, A. O. Petersen, S. M. James, R. S. McDougall, P. R. B. Searcy, A. R. Willmore, A. Filsell, D. Norsworthy, G. Mack, G. Quinn, R. A. Cramond, and E. W. Mills (Secretary).

A.O.T.A. Agreement: Letter was received from the Secretary of the A.A. & P. Council, stating that Victoria was not cancelling the agreement this year, and that Mr. J. B. Mills, the President, strongly recommended that it should not be cancelled, it was resolved that South Australia should follow Victoria, and not cancel the agreement this year.

Apple and Pear Export Council: The Secretary of the Australian Apple and Pear Export Council forwarded progress report and financial statement to June 30, and preliminary agenda for the annual meeting of the Council to be held in Hobart in October. It was decided to prepare items for agenda at the next meeting (August 30).

Pear Case: A brief discussion took place on the question of the Pear case.

Research Sub-Committee: Mr. H. N. Wicks reported that at the meeting of the Research Sub-committee they had been advised that the failure of the recent prosecution of a grower, for failure to spray as required by the inspector was due to the fact that notice had not been properly served.

A general discussion took place on codlin moth control, damage caused by sprays; methods of destroying blackberries; use of tractors in orchards, etc. It had also been suggested that as next year would be the Centenary, an effort should be made to have the annual conference of the Australian Apple and Pear Export Council held in Adelaide.

Mr. Spafford: It was resolved to ask Mr. Spafford to give an address at the next monthly meeting on his recent trip to South America and the fruit-growing industry there.

SOUTH AUSTRALIAN FRUIT MARKETING ASSOCIATION.

The monthly meeting of the executive of the S.A. Fruit Marketing Association was held on August 23, Mr. H. J. Bishop presiding.

Pear Export. It was decided to advise the O.S.R.A. that the forecast for Williams Pears for February was 10,000 cases, provided they could be shipped either by mail boat or by a suitable, direct fast steamer during the first half of February, preferably about the 5th to the 10th.

It was decided to recommend that the Canadian style Pear case (misnamed three-quarter bushel) be generally adopted for Pear export.

Other items for the Hobart conference included: That Rome Beauty should be left in the list of export varieties and that no alteration should be made in the colored labels, members not being in favor of the introduction of different colors for different grades.

QUEENSLAND

Manuring Fruit Trees in the Stanthorpe District

(By H. St.J. Pratt, Instructor in Fruit Culture.)

FOR THE FERTILISING of fruit trees with artificial manure, the programme recommended for mature trees is:—

5 lbs. super., 5 lbs. sulphate of ammonia, 3 lbs. potash per tree.

Applied in two applications, using: 2½ lbs. super., 3 lbs. potash, per tree in March, and 5 lbs. sulphate of ammonia, 2½ lbs. super., per tree in August.

Excellent results have been obtained over the last three years with this formula by the Pacific Potash Coy.

With young trees a lesser amount,

say, 1 lb. per tree per year applied in August, appears to be all that is required in this district; i.e., a three-year-old tree would get 3 lbs. of fertiliser.

Manuring of Grapes.

The following mixture should be applied in the winter, say in August: 5 cwt. super., 1 cwt. potash, 1 cwt. sulphate of ammonia.

The sulphate of ammonia should be used with discretion. For vigorous growing, vines putting on plenty of cane the amount should be reduced or eliminated.

ORCHARD PRACTICE IN QUEENSLAND.

Spraying and Manuring.

Wheat as a Cover Crop.

IN REPLY to a request from the "Fruit World" regarding orchard practice in Queensland, Mr. H. M. Jones, of Stanthorpe, writes as follows under date August 12:

Re Winter Spraying: I use lime sulphur 1-12 on most of the Peaches, but in the early and soft varieties which do not seem to like lime sulphur I am trying a late application of oiled Bordeaux, using the white oil in all cases.

With Pears I find that an oiled Bordeaux—9 B.S. 6 lime, 80 water and three gallons white oil keeps spot and scale in check.

In an endeavor to check mildew in the Apples I have gone back to lime sulphur 1-10 with 3 lb. of colloidal.

I am a firm believer in the practice of manuring fruit trees and thereby secure a crop every year in same ground. I feed my trees through the green crop, generally wheat which is a hardy and sure crop and is easily ploughed in.

I put in about 4 cwt. of complete orchard mixture with the grain in the autumn, consequently the orchard gets no winter cultivation.

The prunings go through an incinerator and the ash thereby goes straight back to the trees.



Mr. H. Barnes.
Queensland Director of Fruit Culture.

QUEENSLAND DEPARTMENT OF AGRICULTURE.

THE HORTICULTURAL BRANCH of the Queensland Department of Agriculture comprises 40 officers as under:—

Messrs. H. Barnes (Director of Fruit Culture); H. J. Freeman (Brisbane), and W. J. Ross, Rockhampton (Senior Instructor); E. F. Duffy (Bowen), H. St. J. Pratt (Stanthorpe), R. L. Prest (Brisbane), S. E. Stephens (Cairns) (Instructors); W. Leslie (Toowoomba), H. Collard (Maryborough) (Asst. Instructors); J. H. Gregory (Instructor in Fruit Packing); A. Person (Brisbane) (Senior Markets Inspector).

There are also 15 Markets and Field Inspectors, as follows:—T. W. Lowry, W. R. Bennett, J. W. Brown, C. N. Morgan, G. W. Jackson, E. J. Lorraine, W. D. Lewis, E. S. Keehn (Brisbane), S. C. Todd (Townsville), A. Wooller (Rockhampton), T. Unwin (Cairns), F. L. Jardine (Stanthorpe), S. A. Green (Wallangarra), A. M. Richardson (Stanthorpe), G. W. J. Agnew (Nambour).

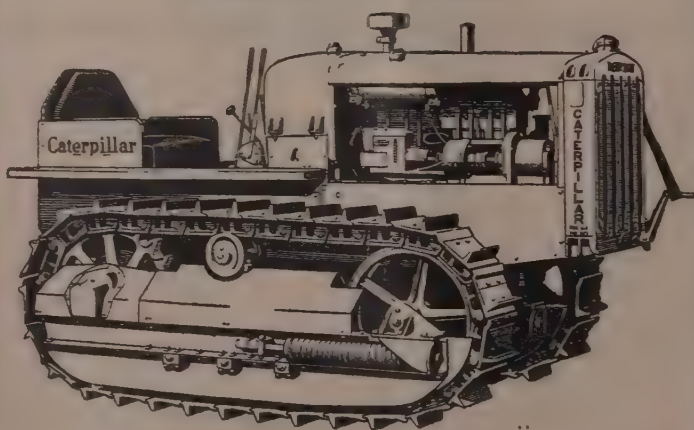
The Banana industry

is controlled by a Board appointed under the Banana Industry Protection Act, the members of the Board being:—

H. Barnes, Director of Fruit Culture (Chairman); R. Veitch, Chief Entomologist; K. R. Hack and J. C. Wilson (Growers. Representatives). The Secretary of the Board is Mr. H. G. Crofts.

Fifteen Inspectors of Bananas have been appointed under the Act as follows:—Messrs. H. J. Freeman, Senior Inspector (Brisbane), W. G. Hancock (Maryborough District), E. Filer (Gympie), J. R. Horsley (Pomona), J. H. Mitchell (Yandina), P. Mitchell (Nambour), E. L. Miles (Palmwoods), M. A. Hannigan (Cooboolture), B. Funnell (Dayboro), C. G. Williams (Metropolitan), D. McLaurin (Redlands), E. P. Williams (Beenleigh), J. McG. Willis (Southport), C. Schindler (Tallebudgera), K. King (Currumbin).

CATERPILLAR TRACTORS



Just Hitch

A "CATERPILLAR"!

TO ANY ORCHARD IMPLEMENT FOR CHEAPER CULTIVATION!

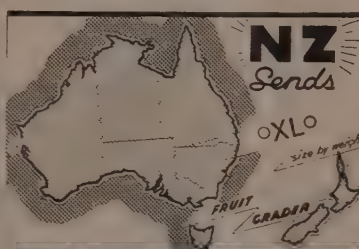
"Caterpillar" steering enables safe close working to your trees—short and speedy turning on headlands, with ample power for hillside work and heavy winter ploughing. "Caterpillar" can easily and quickly handle full width scarifiers, discs or rotary hoe.

"Caterpillar" burns cheap low grade tractor fuels or kerosene, and uses less per acre.

CHECK UP YOUR WORKING COSTS

— with —

WILLIAM ADAMS & COMPANY LIMITED
521-3 Collins Street, Melbourne



TO the fruitgrowers of AUSTRALIA

NO OVERCROWDED BINS

WITH THE "OXLO" (SIZE B WEIGHT) **GRADER**

Fruit of any size can be graded into one or several bins as desired.

Manufactured by
D. W. BINGHAM & CO. PTY. LTD.
South Melbourne.

DISTRIBUTORS:
N. N. McLEAN PTY. LTD.
Wholesale Fruit Market
QUEEN STREET, MELBOURNE, C.I.
Telephone: F 6994

TASMANIA.

FEDERAL MARKETING LEGISLATION.

Tasmania Will be Represented at Privy Council Appeal.

THE VALIDITY of Federal marketing legislation is to be tested at the Privy Council. This has arisen out of the James v. Commonwealth re dried fruit trading.

The Tasmanian Government has decided to be represented at the hearing.

It is understood that the restrictions on trading imposed by the Commonwealth is not viewed favorably by the Tasmanian Parliament.

Opposition to Commonwealth Marketing Legislation.

At the recent conference of State Attorneys-General re marketing legislation, Tasmania made her position clear. Tasmania views with apprehension the possibility of the division of the Commonwealth into a number of economic units, as a result of wholesale establishment of marketing plans.

Tasmania largely depends upon mainland markets for her existence, and is generally opposed to any action which might impair the freedom of interstate trade.

Fruit in Cool Store.

Reports received from the various cool stores throughout Tasmania, indicate that approximately 160,000 cases of Apples and 7,500 cases of Pears were held under refrigeration at August 1, 1935.

This compares with the totals held at this period the previous four years, as follows:—

Year.	Apples.	Pears.
1934	291,000	4,000
1933	198,250	8,700
1932	326,600	8,350
1931	232,200	13,300

The additional quantity of fruit still held in growers' sheds would be approximately 50 per cent. of that held in cool stores.

Western Australia.

Over 950,000 Cases Exported.

Figures showing the export of fruit from Western Australia up to June 30, 1935, are to hand from Mr. Geo. W. Wickens, Superintendent of Horticulture, as follows (in cases):— Apples, 859,463; Grapes, 57,482; Pears, 30,060; Oranges, 3,523; Plums, 421; other fruits, including Lemons, Nectarines, Peaches, Grapefruit, Passionfruit, and Quinces, 326. Grand total, 951,276 cases.

The bulk of the fruit went to the United Kingdom, with fairly substantial quantities to the Continent and the Near East.

MONEY Available Immediately TO **£250**

From Lowest Current Rates. Monthly Repayments and Easy Terms can be arranged to suit you. Confidential, considerate and courteous dealings. Apply The Manager, SPECIALTY INVESTMENTS PTY. LTD., 89 Collins St., Melb., C.I. Cent. 2643. "Repay us out of Income."



FOR SALE.

Ronaldson & Tippet, two-wheels Barrel Type Spray Pump, with 2½ H.P. Engine and Myers Pump with relief valve. All complete. Definitely new as from factory. Apply—J. C. DAHLSEN & CO., Hardware Merchants, Bairnsdale, Victoria.

APPLE EXPORT CASE.

Western Australia definitely favors the Redwood Case.

AS THE APPLE CASE question comes up again at the forthcoming annual meeting of the Australian Apple and Pear Export Council at Hobart at the end of October, the following comments will be of great interest.

Mr. A. T. Booth, Hon. Sec. Western Australian Fruitgrowers' Association, writes to the "Fruit World" under date August 14, as follows:—

"In your issue of March last, a letter appeared from a Mr. Charles Higgs, of Nelson, N.Z., in regard to the use of the Australian hardwood case, and although this gentleman states he was in England, we consider that he was very ill-informed, as he must have seen just a certain batch of roughly cut cases. The same type of letter as appeared in your paper he also wrote to the "Timberman," in Oregon. The attention of our Fruit Shippers' Committee was called to this article, and the secretary was instructed to write in answer to the criticism. I am enclosing herewith a copy of the letter that was written, and also a cutting out of our local paper giving the opinion of our Agent-General. We would like to see these published in the 'Fruit World.'"

"I supervised the shipment of our fruit on quite a large number of boats during the past season, and in several instances the officers of the ships were highly pleased with our cases, and stated that they were the best they had seen in Australia. There is also no question that our case certainly stands the handling all fruit receives far better than the ordinary whitewood cases."

"Now that we are having this timber seasoned and dressed, the boards can be cut much thinner, and we are now able to bring the weight down to approximately 10 lbs., which is only a very little more than the usual whitewood cases."

The letter, which was sent to "The Timberman," at Portland, Oregon, U.S.A., was as follows:

"The attention of my committee has been drawn to an extract from your May, 1935, issue, which condemns the use of hardwood cases for the export of Apples and Pears."

"I cannot, of course, speak of the position as it affects Tasmania, but the remarks contained in your article are far from correct as regards

Western Australian Redwood cases, made from Karri and Jarrah.

"In the first place, all hardwood cases exported from Western Australia are made from seasoned timber, and the ends, tops and bottoms of the cases are all dressed. The resulting case is very neat in appearance, and compares very favorably with the whitewood box."

"The drawbacks that your article mentions, namely, staining, curling of battens, and difficulty of stencilling rough ends, simply do not occur."

"Furthermore, the case when made up in this way, weighs not more than 11-13 lbs., as against 14-18 lbs. quoted in your article."

"As regards bruising, recent experiments conducted by the Council for Scientific and Industrial Research, appointed by the Commonwealth Government, clearly establish the fact that fruit in hardwood cases, lined with strawboard, is less subject to bruising than in the Canadian whitewood box."

"The report issued by the council's committee, referring to the hardwood dump case, stated inter alia:

"The Hardwood Dump Case of 9-Inch Width: This proved to be the outstanding case in the tests. It proved the best in respect to packing bruising, and in all the drop tests, except on the ends. The greater liability to injury when bumped on the ends, as already stated, was undoubtedly due to the use of the angled pack in this case, compared with the straight pack in the Canadian types. Dump cases should always be stacked and handled in the ordinary way, i.e., on their sides."

"Shippers in this State have, however, no intention whatever of changing over to whitewood cases, and that their judgment in this direction is sound, is, I think, clearly shown by the enclosed cutting from the "West Australian" of July 24, 1935, covering reports from the Western Australian Agent-General in London indicating that the larger resellers of fruit strongly desire the retention of our redwood cases."

Yours faithfully,
(Sgd.) C. H. MERRY,
Secretary, W.A. Fruit Shippers' Committee.

IODISED WRAPS FOR FRUIT.

Success With Grapes, Oranges, Tomatoes, Plums and Apples.

As we go to press details are to hand of the new and successful method devised in England for storing fruit in fruit wraps impregnated with iodine.

Particular success has been achieved with Grapes, Oranges, and Tomatoes. Further tests are necessary with certain varieties of Plums and Apples. Further details next issue.

REDWOOD FRUIT CASES.

Retention by W.A. Urged.

Favored by English Sellers.

The Premier (Mr. P. Collier) has received from the Agent-General for Western Australia (Sir Hal Colebatch) a letter in which retention of the red "dump" (bushel) cases for export fruit from this State is strongly supported. Sir Hal backs his remarks with opinions expressed by leading English sellers. The letter is as follows:—

"On December 14 last year, the acting Premier wrote to me in regard to the efforts that were being made to make it compulsory for fruit-growers to use what is known as the Canadian case, instead of the 'dump' case for all fruit exported from Australia, and asked me to watch the matter during the coming Apple season, and to get all the information I could on this question of cases."

"This has been done, and I have forwarded to you the report prepared by Mr. Whittaker, together with letters from George Monro Ltd., Barney Springer, John Seed & Sons, White & Son and J. C. Houghton & Co. Ltd. There is not the slightest doubt that the opinion is overwhelmingly in favor of our retaining the red case, nor does there seem to be any very special leaning towards an alteration in the shape of the case. That may be regarded as a matter on which opinion is divided."

"So far as retaining the red case is concerned, there can be no question that West Australian Apples, because of their generally better quality, do bring 6d., 9d. or 1/- higher prices than those from other States, and sellers of our Apples are strongly of opinion that if we depart from the red case we shall lose some, if not all, of this advantage. When the time comes that none of the States export

Fruitgrowers ! Do You Know That

THE WOLSELEY

Sheep Shearing Machine Co. Ltd.

Argyle Street, Miller's Point, Sydney

are Sole Agents for the

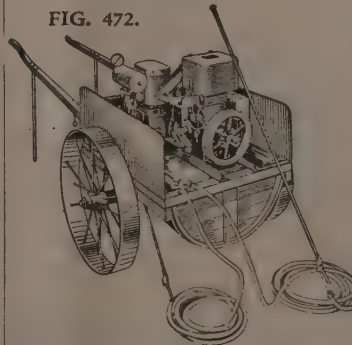
ROSEBERY Engine Works Ltd.

Ask us for particulars.

Telegrams: "Shearingco, Sydney."

Letters: P.O. Box 1631BB, Sydney.

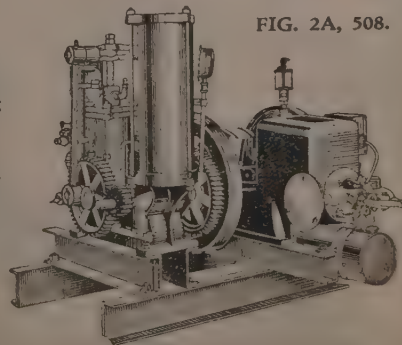
FIG. 472.



Orchard Spray Cart. Standard 2-wheel outfit, with 2½ h.p. Rosebery vertical hopper-cooled petrol engine, direct coupled to Fig. 450 high pressure spray pump.

Separate Self-contained Power Spraying Unit, for mounting on sledge or truck. Has 2 h.p. Rosebery hopper-cooled petrol engine.

FIG. 2A, 508.



ENGLISH APPLE CROP SMALL.

Only a Quarter of Normal.

Owing to adverse seasonal conditions the 1935 English Apple crop is small, — probably only a quarter of normal.

any but the best quality Apples, it will be time enough for us to merge our identity in theirs.

Sellers' Opinions.

"One of the sellers uses this expression: 'We have large handlings of West Australian fruit, and from our experience we definitely say that Western Australia must keep to the redwood boxes. Buyers think that they are Victorian when packed in white boxes. While not wishing to criticise Victorian fruit, West Australians make 6d. and sometimes 1/- a case more.' The same sellers recommend that 'Comice' Pears should be packed in redwood trays.

"Monro's, probably the largest sellers here, say: 'There is no doubt your redwood is a fine advertisement for your fruit, and I consider you have very strong reasons for continuing this wood. First, the customers like it; secondly, it is an attractive case, and marks the origin of the fruit; and, thirdly, it is a home product of Australia.'

"White & Son, of Hull, also very big dealers, urge us to continue with the red case, saying: 'These are a trade mark on their own.'

"John Seed & Sons and J. C. Houghton & Co. do not attach the same importance to the red case, but they have not handled our products for the same length of time or to the same extent."

PEACH MOTH IN THE GOULBURN VALLEY.

Nicotine Sprays Yield Best Results.

(By F. J. Gay, B.Sc.)

THE DESTRUCTIVE PEACH MOTH, which has wrought havoc in the Goulburn Valley (Vic.), is being intensively studied under the joint auspices of the Council for Scientific and Industrial Research, the Victorian Department of Agriculture and the Canned Fruits Control Board.

The scientist in charge is Mr. F. J. Gay, B.Sc., with headquarters at the Ardmona cannery. In his first report, just published in the Victorian Journal of Agriculture, Mr. Gay, after giving details of the life history of the Peach Moth (*Cydia molesta* Busck), draws the following conclusions:—

The work this season has necessarily been of a preliminary nature, but the following suggestive points have been revealed:—

(1) Both newly hatched Peach moth larvae and codlin moth larvae have the habit of rejecting all surface tissue. The small size of newly hatched Peach moth larvae compared with newly hatched codlin moth larvae suggests that the efficiency of stomach poisons is influenced by particle size.

(2) Of the various substances tested as ovicides and cover sprays, nicotine sulphate definitely gave the most promising results. Its compatibility with other sprays makes it especially suitable for use in combination with early season routine sprays.

(3) The evidence indicates that untreated bandages not only catch large numbers of over-wintering

BRITISH APPLE INDUSTRY.

Nearly as Large as All Empire Countries Combined.

There are 15,000,000 Apple trees in England, — nearly as many as in all other Empire countries put together, — yet Great Britain imports 337,000 tons of Apples annually.

Peach moth larvae, but also favor the action of native parasites.

(4) Native parasites appear to be restricted in their action to the winter months. Arrangements have been made with the U.S.A. Department of Agriculture to introduce the *Ichneumon* parasite, *Macrocentrus ancylovorus* Rohw., which attacks Peach moth larvae in the spring and summer.

"APPO" FRUIT DRINKS.

After 12 months' experimental work in the production of healthful "Applo" drink, made from Apples, the proprietors, Natural Fruit Products Pty. Ltd., with a capital of £2,000, have merged into a larger concern—a public company entitled "Applo Ltd." with a nominal capital of £10,000.

"Applo" found a ready sale from the commencement, and the company now finds its business materially expanding. This is good business for all concerned—the growers, the public, and the company itself.

The factory is at Heywood-street, E. Malvern, at the rear of 203 Dandenong-road, near Caulfield station.

THE DEVELOPMENT OF "CATERPILLAR" TRACTION.

Farmers operating on the California river valleys in the early days encountered many haulage difficulties due to wheel slippage in the soft delta soil and this created a demand for a new tractor that would pull big loads across soft fields. The inventive genius of Mr. Benjamin Holt was responsible for the production of a new type of tractor.

The new tractor was christened "Caterpillar," a name that has since been registered throughout the world. And through the years following, the Caterpillar Tractor Co. has studied and developed its product to such perfection that we find them to-day used by loggers, contractors, agriculturists and orchardists in every country in the world in ever increasing quantities.

In 1925 the question of powering the tractor with a Diesel engine was first considered. In 1931 the first "Caterpillar" Diesel Tractor was sold. In 1934 the "Caterpillar" Diesel horse-power figures reached a total of 237,314.

In Diesel tractors the size is not confined to one machine, no fewer than three tractor sizes being available, and in addition there are five different sizes of low grade fuel or kerosene burning "Caterpillar" machines to choose from.

For orchard work, the "Caterpillar" has a very strong appeal, because of its size—it is a wonderfully compact machine—and because of its ability to work close on short headlands. In steep hillside orchards the "Caterpillar" can easily pull four furrow ploughs where uphill grades of 1 in 3 and 1 in 4 are encountered, and can do this work on a fuel consumption of approximately 1 gallon per hour.

Many growers use "Caterpillar" tractors for cultivation, drainage, hauling fruit from the orchard, spraying, etc., and in this way find it a most advantageous unit. A further use is found by some in using it as a power unit to cut case timber. A telling feature of the modern "Caterpillar" is its low operating cost and its very low maintenance cost.

Messrs. William, Adams & Company Limited of 521 Collins-street, Melbourne, have a fund of most interesting information concerning these machines including records of operating costs which are well worth investigating.

◀ FRUIT TREES ▶

Of Outstanding Quality

True to name, healthy and well-rooted. Citrus trees in large quantity — Budding Wood supplied by the Bud Selection Society of N.S.W. — Worked on LEMON, SWEET ORANGE, and TRIFOLIATA Stock.

CATALOGUE FREE ON APPLICATION.

ESTABLISHED 1901.

L. P. ROSEN & SON, Fernhill Nurseries

Pennant Hills Road, CARLINGFORD, New South Wales.

Phone: Epping 96.

ARE YOU GRUBBING?

Previous experience had convinced me that to be really efficient a grubbing machine should have ample power and ropes that will meet the heavy demands required of them. I found that shovel and axe work is very costly either by itself or in conjunction with a machine. The machine that offered these features, with a host of others, was **THE "MONKEY" GRUBBER.**

It gave me the power of 260 pairs of hands in a simple and compact form; the lever is short, so that I am able to stand firm-footed and get the full stroke. There are two speeds in the machine, as well as an automatic release that allows me to let off a strain, or as the machine will work in any position, it comes in for all jobs that would require a chain block. It is taken to the job on a pair of wheels like a barn truck, and is rigged for work in a few minutes. The ropes are in lengths that I find easy to handle, and each one is fitted with hook and loop couplings, so simple and absolutely IT for effectiveness. The makers have included a sturdy snatch block with a novel method of securing to the ropes, and also a fine type of arm gripping rope shortener. The latter makes it very easy to accommodate the lengths of rope to the tree or stump being pulled, and is quickly released from the rope. The combination of so many time and labor saving features makes the "Monkey" Grubber a superior grubbing outfit.

REMEMBER FOR YOUR GRUBBING THERE'S ONLY



H. H. HINDS,
225 Clarence Street,
Sydney.

A. G. WEBSTER
& SONS,
Hobart & Launceston.

TREWHELLA'S

MONKEY GRUBBER

A. ROBINSON,
821 Ann St., Brisbane

Leading Stores and
Merchants, South and
West Australia.

TREWHELLA BROS. Pty. Ltd. Trentham. Vic.

CONFERENCE OF STATE ATTORNEYS-GENERAL.

Unanimity Not Reached—No Likelihood of Altering Commonwealth Constitution.

At a conference of State Attorneys-General early in August, constitutional aspects of commodity marketing were discussed, but unanimity was not reached, and as a result there is now no likelihood of any action in the direction of amending the Constitution (to alter section 92—absolute freedom of interstate trade) or restricting the right of appeal to the Privy Council.

Organite Fertiliser: This fertiliser, which is nitrogenous, phosphoric and rich in humus, has been used in Great Britain, U.S.A. and the Continent for more than forty years. This general purpose fertiliser is now being manufactured in Australia by Organite Pty. Ltd., of 444-450 Smith-street, Collingwood, Victoria. Orchardists visiting the Melbourne Royal Show during September are invited to call and inspect this product at the Organite stand situated in the Chamber of Manufacturers' Hall.



C. V. NUTT, President
Melbourne and Metropolitan Retail
Fruiterers' Association.

INTERESTING COMMENTS regarding the retail fruit trade were recently made to a "Fruit World" representative by Mr. C. V. Nutt, President of the Melbourne and Metropolitan Retail Fruiterers' Association.

Among the comments by Mr. Nutt were the following:

"The retailing of fruit is really an important enterprise as it forms the final contact between the growers and public, and it would appear to be quite evident that fruitgrowers and retailers should work in close co-operation to bring about the best results for all concerned.

"With regard to Apple varieties, I find the general public favor the well known sorts such as (eating) Gravenstein (early), Jonathan, Delicious, Democrat and Rome Beauty; (cookers) Five Crown, Stewarts, Granny Smith, and Statesman.

"My experience in the trade convinces me that these are the most popular varieties of Apples. I know, of course that growers have other varieties in their orchards—many of these are doubtless quite good—but they are unknown, and in my opinion, growers would do well to work over their trees to the popular varieties.

More Research Needed.

"Fruit retailers feel that there is very great scope for effective research work in regard to pests and diseases. Retailers stand right behind the growers in their request for increased horticultural research to combat pests and diseases which now cause such great losses to growers, distributors and the public—such losses as are occasioned by brown rot of Peaches and stone fruits, rots in Tomatoes, the squinter disease in Bananas.

"Surely these troubles are capable of being greatly minimised."

:: ::

In conclusion, Mr. Nutt expressed appreciation for the activity of the "Fruit World and Market Grower" for providing opportunity for ventilating these matters of mutual concern.

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Retailers are interested in reading in this monthly Journal details of their own particular activities, but also crop reports, market news, and the doings of growers in regard to cultivation, varieties, packing, brands, grading, etc.

ROADSIDE APPLE SALES.

Vendor Fined for Topping.

AT the Dandenong Court in July, John Wolstencroft was prosecuted for exposing topped Apples for sale on the roadside at Dandenong.

Defendant was fined £1 and 2/6 costs.

The Melbourne and Metropolitan Retail Fruiterers' Association.

President, Mr. C. V. Nutt; Vice-President, Mr. H. Kruse; Committee, Messrs. Levin, Brown, Child, Chetkett, Graydon, Delaney, Marsden, Canestra, Avitabile, Aston, Wilkinson, Norris; Secretary, Mr. E. W. Thompson; Asst. Secretary, Mr. Wm. Trivett; Treasurer, Mr. Chas. Mawdsley.

Delegates to Vic. United Retailers' Council, Messrs. Thompson and Mawdsley.

THE RETAILING OF FRUIT.

Standardisation Urgently Needed — Co-operation of Growers, Wholesalers and Retailers is very Desirable — Oranges Sold by Number have Advantage over Apples and Pears So'd by Weight — Evil of Roadside Selling of Poor Quality Fruit — Importance of Advertising to Increase Fruit Consumption.

IN A RECENT INTERVIEW Mr. E. W. Thompson, secretary of the Melbourne and Metropolitan Retail Fruiterers' Association stated he welcomed any and every effort to bring the various sections of the "fruit industry together. There should be no need for growers, wholesalers and retailers to consider themselves in watertight compartments. In fact, it had been suggested in the past that the interests of the three sections mentioned were necessarily antagonistic. This idea however was exploded.

The trade of the whole world in every branch of commerce and industry was organised along the lines of distribution from producers through wholesalers and retailers to the public.

In the fruit business growers needed the service of both wholesalers and retailers, continued Mr. Thompson, and only good could come when there was co-operation and goodwill.

Fruit retailing was no "easy money" business. It involved long hours, hard work and all the difficulties connected with a very perishable product.

Then again it had to be remembered that all growers were not as yet fully-fledged angels.

In fact the lack of standardisation of fruit was a serious defect. Both growers and traders suffered.

Some Reforms Suggested.

Among some of the reforms suggested by Mr. Thompson were the following:—

Apples should be sold in the dump case, not the "long" or "upright" bushel. These upright cases were old and frequently dirty.

Cases should show the number of apples contained therein—exactly as is done with oranges.

It would certainly be of great value to the growers and would save the time of the shopkeeper if Apples, Pears, Peaches, etc., were sold by number instead of by weight.

Now that cool stored Apples are on the market "topping up" is all too frequent. This needless to say is not a charge which can be laid at the door of the good grower. Nevertheless the evil is very real one and some "dealers" are tricky customers. Much harm, however, is done and it should not be passed over by the industry. The good name of the industry is at stake and every effort should be made to eradicate this miserable evil.

Why should not fruit be standardised? asks Mr. Thompson. Other lines of produce and commerce are standardised. Apples constitute one of the big lines in the fruit trade yet this is the one fruit where the industry is badly falling down. In these progressive days this evil should be eradicated. The reform is long overdue.

Regarding Oranges, it is to be hoped that growers in their own interests will refrain from sending immature fruit early in the season. These highly colored but immature oranges are a burden to all, wholesalers, retailers and the public. Once the public buy those nice looking oranges (artificially colored by ethylene gas) and find they are bitter the purchased fruit remains uneaten, and no more Oranges are bought for quite a considerable time.

It would be illuminating to the growers if they could hear the comments of the public. The retailer is soundly abused and Oranges purchased remain in the shop unsold.

"That is why we supported the recent deputation to the Minister for Agriculture requesting the raising of the standard of maturity of Oranges," continued Mr. Thompson. "We know of course that quite a number of consignments of oranges were condemned as being immature. This action on the part of the Department was fully justified. Our point, however, is that much of the fruit which was allowed to pass for sale should similarly have been condemned. In this as in other matters the interests of growers and distributors are identical.

We like the Orange case and the fact that the number of Oranges in the case is shown on the case.

In this matter the Orange grower has every advantage over the Apple and Pear grower. Oranges are sold by number. Apples and Pears are sold by weight. People think in terms of Oranges "by the dozen." The Apple and Pear trade will improve when the public can be educated to think in terms of buying these fruits "by the dozen"—as is done in Sydney and elsewhere.

Roadside Fruit Selling.

How many people are "taken down" each week by roadside fruit sellers? Motorists and others think they are buying "direct from the grower." In most instances the fruit is of poor quality; and it is often obtained from dealers in the Victoria Market and carted out to these roadside stalls for sale, particularly on Sundays. This is a menace to the industry.

We trust that the Department of Agriculture will prosecute offenders. The general public is given a wrong impression from these roadside stalls regarding fruit values. Here again the genuine grower is a loser through this cheating practice.

The ideals behind the

"Victoria Mark" System

are quite sound and they should be widely adopted. It will be a fine thing all round when retailers can purchase standardised lines of fruit, knowing that every Apple in the case is of the same size and quality.

Advertising is a force which as yet has not been sufficiently adopted to increase fruit consumption. This has benefited the industry in other parts of Australia, and the experiences of growers particularly in U.S.A. in increased business through advertising is well known.

"There are other matters which retailers would like to bring before the industry," concluded Mr. Thompson. "The points I have enumerated, however, will set growers thinking."

"It is certain that the broad view of industry co-operation is vital. Re-



E. W. THOMPSON, Secretary
Melbourne and Metropolitan Retail
Fruiterers' Association.

tailers are only too happy to work in conjunction with growers and wholesalers to uplift the trade."

RETAIL FRUITERERS' ASSOCIATION.

Additional Sheds at Victoria Market — Need for Parking Facilities for Retailers — Licensing of Hawkers and Pedlers.

THE monthly meeting of the executive of the Melbourne and Metropolitan Retail Fruiterers' Association was held on August 1. There was a good attendance of delegates present. The president, Mr. C. Nutt, was in the chair.

The secretary reported that the Advisory Board had been called together to consider the plans for the

Additional Sheds

to be erected shortly for the convenience of growers and the pea and bean merchants operating at the Victoria Market, and that the Board had approved of the plans. The new sheds will occupy practically the whole of the vacant land available at the market and will be a decided improvement under which the peas and beans will be offered for sale.

Some discussion took place in reference to the

Parking facilities

for retailers' vehicles whilst making their purchases, and as the vacant land to be utilized will be no longer available retail fruiterers are somewhat perturbed over the matter, as very often as many as 300 or more are parked on the square at the one time. These will in the near future be forced to leave their turnouts in the surrounding streets which at the present time are already overcrowded.

A committee was appointed to consider the matter and take any action they thought advisable to get over the trouble. The carrying of heavy cases of fruit and bags of vegetables hundreds of yards to the vehicles should be minimized as much as possible.

Some complaints were made at the non-enforcement of the Hawkers and Pedlers Act in some districts. This Act was introduced to regulate the selling of produce and other goods outside of shops, markets and private property and also to see that only persons of good repute were issued licenses, and although it is policed well in some districts there is vast room for improvement in others. The man who pays his 20/- per annum deserves some protection from those who do not pay anything.

The secretary was also instructed to enquire and report to next meeting whether it is compulsory to have the number of each license painted on the holder's vehicle.

[Memo: It is interesting to note that the Secretary and Treasurer of the Retail Fruiterers have been elected to high office in the Victorian United Retailers' Council—thus President Mr. C. Mawdsley, Vice-President Mr. E. W. Thompson.]

Motor Cars, Trucks, Tractors

HORSES versus TRACTOR.

Cultivation Costs Compared.

SOME INTERESTING FACTS in regard to the comparative costs of horse and tractor cultivation were presented by Dr. B. A. Keen, Assistant Director of the Rothamsted Experimental Station, in a lecture to the Institute of Automobile Engineers recently, from which the following extracts are taken:—

The different kinds of implements used in soil cultivation have all developed from a pointed stick, whose function was to stir and break up the soil. Cultivators and harrows are in a direct line of descent from the pointed stick; the plough represents a divergence from the line, in that

its purpose is to invert the soil rather than to stir it. The extremes of plough design are the sod or grassland plough, which turns over an almost unbroken ribbon of soil, and the digger-breasted plough, common in Continental areas, which turns over a rough broken furrow with the maximum of disruption and mixing.

Before the advent of the tractor the design of cultivation implements and their methods of use had evolved subject to two basic considerations: a supply of cheap and abundant labor and a forward speed of 2-2½ m.p.h. which suited the natural walk of both horse and man.

Tractor Misunderstood.

At first the tractor had little effect on these considerations—it was regarded as a more powerful haulage agent than horses, and, therefore, suitable for heavy jobs, such as stubble-breaking and deep ploughing. With further experience, and with the better designs of tools for the lighter forms of cultivation, the scope of the tractor rapidly increased. The addition of such improvements as the power take-off and the development of power-operated implements for the hay crop opened up additional uses for the tractor as a farm tool.

There is little doubt that a steady increase has taken place in the number of hours' work per year put in by the tractor on the average farm or orchard.

But, desirable in many ways though this increase may be, it must be remembered that the outstanding advantage of the tractor is its ability to deal quickly

with urgent work. Farming cannot be done to a rigid time-table; the weather is the controlling factor. In unfavorable seasons the farmer may be unable to work his soil when he wishes. He must produce a suitable tilth before he sows, and for this he may be compelled to wait so long that his crop, when sown at last, is almost certain to suffer in yield.

The economic value of this reserve of power, especially to the farmer on heavy land, is incontrovertible. The tractor enables him to cut costs directly, but even more important is the indirect cost-cutting, through the ability to get work completed in unfavorable spells. No costings system can show the money value of indirect savings, for obvious reasons, but no farmers would dispute their importance.

Tractor v. Horses.

Agricultural economists have made numerous comparisons of tractor and horse costings on the farm and orchard. In common with all agricultural costing data, they present difficulties which do not arise in other industries. Take as a simple example the cost of keeping a horse. It will be fed, wholly or partly, on food grown on the farm. What figure should be assigned to this food? It should be less than the market price of the foodstuff, but to what extent?

In spite of inherent difficulties, direct comparisons of horse and tractor costings are capable of showing in what way the tractor can achieve a direct saving as compared with horse-power. Some typical results are given in the following table, which has been constructed from figures supplied by agricultural economists.

Actual Costs.

The figures apply to individual farms employing both horses and tractors, and this partly accounts for the wide variations in costs for the same work. For our present purpose, however, this does not matter. They show the cost per acre by the use of horses and tractor respectively and include average wages of the operator or driver.

Ploughing—	Horse . 20/-, 19/-, 14/10 and 17/2	Tractor 15/9, 14/6 11/11 . 8/-
Cultivating—	Horse, 2/6 and 4/-	Tractor, 3/6 and 4/5.
Harrowing—	Horse, 1/6; Tractor, 3/6.	
Rolling—	Horse, 1/6; Tractor, 2/1.	
Harvesting (Grain)—	Horse, 2/7, 2/8 and 2/1.	Tractor, 3/11, 3/6 and 4/7½.

Tractors Reduce Costs.

Though the salient feature of the table is that on all these farms tractor ploughing is cheaper than horse ploughing, while in all the other operations the reverse is the case, the explanation is simply that in ploughing the tractor is given a full load, while in the other operations it is working below its capacity. The practical implication is that all tractor cultivation tools should be designed to give a full load, like the plough. The modern tractor cultivator already does this, but there is still scope for the farmer to use gangs of harrows to increase the resistance for this naturally light type of cultivation.

ATTACHING NEW RADIATOR HOSE.

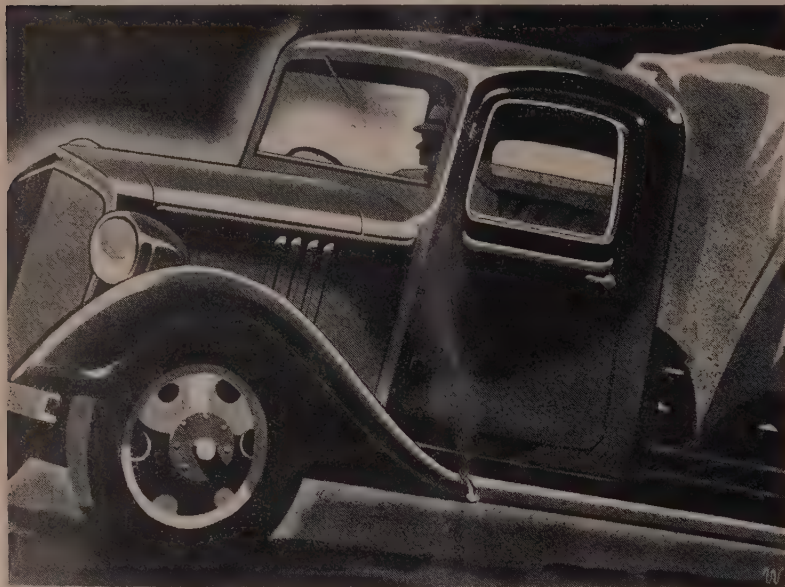
When a perished hose connection for the radiator must be renewed it is important to procure one of exactly the right size. The ends of the pipes should be dressed with fine glass or emery paper to remove all fragments of the old hose which might be adhering, and then coated with white lead, after which the new hose is worked into position. Do not tighten the clips so much that they damage the outer surface of the hose, which might well be given a coat of varnish or shellac to protect it from oil and grease.

BLOCKS FOR JACKS.

Sometimes the jack in the standard tool kit is not suitable for the car, because it is either too long, even when fully closed, or might not have an adequate extension. Also, many motorists prefer to buy hydraulic types of jack which can be operated with minimum effort. To guard against roadside difficulties which might occur it is a good plan to carry a few small squares of hardwood: say 6 x 6 inches and two inches thick. Such chocks will often prove very serviceable when a wheel has to be changed in inconvenient circumstances, and can also be used to wedge the unaffected wheels as a precaution against the car rolling while wheel-changing is in progress.

ENGINE STALLS WHEN HOT.

CERTAIN CAR OWNERS seem to think that they have achieved something if by fiddling with the slow running adjustment of the carburettor they can induce the engine to idle at only a few revolutions a minute. Far from that being necessarily a sign of good working, it is often the reverse, and it is far better to have the idling mixture and throttle stop adjustment so set that the engine ticks over fairly briskly, say, at revolutions equivalent to about 8 m.p.h. in top gear. That rate will not be fast enough to interfere with gear changing even if there is not a synchromesh transmission, and an advantage is that there is less likelihood of the engine stalling when one is coasting down hill in neutral or with the free-wheel in use. If the engine idles when cold, but stalls if the throttle is closed below, say, the quarter-open position, it is obvious that the mixture is far too rich and that either the slow-running adjustment should be cut down or a smaller pilot jet used in the carburettor, according to the make fitted.



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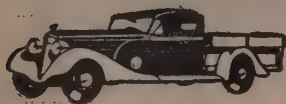
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ENGINE**

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Utility. Wellsides Delivery with roadster front. £240 . . . plus Sales Tax.



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THE MARKET GROWER

OFFICIAL ORGAN OF THE MARKET GARDENERS AND FRUITGROWERS' SOCIETY OF VICTORIA.
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 Secretary: Gr. C. C. A. George, Elghett Road, Moorabbin, Vic.
 ALSO OFFICIAL ORGAN OF THE KOONDROOK & BARHAM TOMATO GROWERS' ASSOCIATION.

FRENCH or KIDNEY BEANS.

Search for New Varieties — Why Stick to Canadian Wonder if there are Better and Wilt-proof Varieties Available—Need for Co-operation Between Growers, the Seed Trade and Research Workers.

AS SEASON FOLLOWS SEASON, this delectable member of the vegetable kingdom seems to loom an undiminished problem to the grower. Many have given it up as an unsound proposition; others are wavering in the balance. The impression that it has become so risky a crop as to be left alone has gained ground everywhere throughout the States. But why? The majority answer will doubtless be a chorus of "wilt."

It would be indeed foolish to deny the existence of a disease—bacterial or fungoid. However, it may be defined, or to discount the great amount of work that has been directed to a solution of the trouble, but the

writer is firmly of opinion that most blame is upon the growers themselves, equally with the seed trade, in conservatively following with one or two varieties for generation after generation.

Why Only Canadian Wonder?

Until a year or two ago, we had come to think of the French Bean in terms of "Canadian Wonder." No other dwarf variety was regarded as worthy of much consideration, and whether warranted or not, "C.W." held such an exalted position that we did not attempt seriously to investigate the relative merit of others. It never seemed to occur to anyone here to ask if a better Bean were

obtainable, and so nobody worried. Normally, the grower had good crops and satisfactory price returns; the public was offered this one Bean in every market-place, year after year, and knowing no other, was content to accept it.

The broad fact so deliberately ignored is that the "Canadian Wonder" never was even among the very best of French Beans. It certainly possessed the good qualities of productivity and hardness to a degree, but lacked considerably in the final test of table quality, which should be, as it is in most countries, the deciding factor of merit in all culinary vegetables. But in this matter we had come to be firmly in a groove where the seedsman sold "C.W." to the gardener to grow for a public which asked for it, and this seemed sufficient recommendation for all concerned.

On the Continent of Europe, where the number of French Beans in commerce runs into hundreds of varieties, "Canadian Wonder" is not among the best esteemed or recommended.

It is not to be assumed that we in this country possess a better developed epicurean faculty, but rather have been very backward in coming to realise that the "proof of the pudding" axiom is just as applicable to articles of vegetable diet. In the older countries, more importance is placed on culinary merit than market-stall appearance or traditional value. How, then, can one justify our slavish adherence to any absolute old-time varieties of vegetables?

More Research Needed.

Bean "Wilt," with all the loss and worry that it has meant, will have served one very good purpose if it leads to better knowledge and understanding of the many kinds in which we hitherto have felt no interest. Not that the great body of growers would have any desire to use their precious time and resources in exhaustive experiment with the vast number of Beans in the world to-day, for this can be ruled out as impracticable.

But in each of the different States or centres there might be constituted, under competent authority, an experimental research body to conduct trials in the best possible way, until some finality is reached.

Valuable work on these lines is now being done in Queensland by the "Fruit Marketing Committee" of that State, and its deliberations will doubtless be of much aid to local growers, but a general extension of the scheme is of urgent importance.

Unfortunately for all engaged in market gardening, there seems to be very little record or any sustained cohesion among this section in the past; certainly less of it than exists to-day between most other producers.

The question then arises whether there can be any immediate prospect of the growers themselves instigating the formation of bodies as suggested, the probability of which is somewhat remote. The various State Horticultural Departments, with their limited financial resources, have not so far been able to tackle this matter effectively, so to whom may we reasonably look for a lead? The answer is—a more efficiently conducted seed trade.

If the grower owes it as a duty to support a local seed business, the latter should be in duty bound to assist in every way within its knowledge and means the best interests of the grower.

Australia, and particularly Victoria, possesses climatic and other conditions that are almost perfect for Bean seed production, and indeed does produce samples equal to any the world over. This claim is hardly to be disputed on any grounds whatsoever, but we may justly question the lack of co-operative relationship between trade and growers, so far as the interests of the latter are concerned.

How negligible has been the enterprise in promoting really worthwhile varieties. Not until "Canadian Wonder" was so stricken with disease that the grower was forced to demand something else was anything done, and then in a way which has proved full of error. In some instances, old and almost forgotten varieties such as "Pale Dun" were resorted to; not at the behest of the gardener, but as a carefree brain-wave from sections of the trade.

Then followed one or two hastily selected importations, adopted on the raiser's description, from some distant part of the world. Both the old varieties, which had long since



ORCHARDING for PROFIT

The English Fordson Tractor, with increased power, great sturdiness and exceptional reliability, is the ideal unit for every job connected with orcharding. It saves time and money on grubbing, ploughing, rolling, harrowing, spraying, dam excavating, pumping, timber cutting, hauling to packing shed or market.

The English Fordson Tractor is entirely built in England for Australian conditions. To Fordson engineering and production resources have been added the quality of finest English materials and skilful English workmanship.

Many outstanding features are incorporated in the design of this efficient power unit.

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Record-breaking sales throughout Australia have effected further economies in the cost of manufacture of the English Fordson Tractor. These savings are now handed back to Tractor users by means of an immediate price reduction. Ask your local Ford dealer for further particulars. He will explain also the easy Fordson Purchase Plan.

For the Orchard . . . FORDSON is available fitted with Low Pressure Pneumatic Tyres or Standard Steel Wheels with Malcolm Moore Spuds

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DISTRIBUTORS FOR VICTORIA, RIVERINA AND TASMANIA

FRENCH OR KIDNEY BEANS.

(Continued from page 35.)

been discarded as unsuitable, and the new ones that had not been submitted to practical test, were placed before the growers with much unwarranted recommendation, and accepted with more or less misplaced confidence. The result is well known, and to-day we find growers in a bigger quandary than ever, knowing not what to grow, and fearing to try any more "novelties."

Let us now consider briefly the policy and methods followed by the more important of English seed houses.

In the plant laboratories (or "workshops" as they are sometimes called), they have, through many years of untiring work, produced an untold number of hybrid Beans, but always discarding those that did not measure up to desired standards. Varieties were practically "made to order"; not merely for the purpose of creating novelties for a whimsical public, but to meet its most exacting demands.

As in all vegetables for culinary use, the keynote is table quality first. They did not tell the grower he should be content to continue growing the varieties of his forefathers day because the people would refuse others, but instead set the standard, and then said: "Here are the Beans, tested and proved. You can grow them with every confidence that your clients will appreciate them for what they are."

Surely if it only commonsense that the best authority should think for the consumer, on whom the grower in turn depends, rather than that it be left to all and sundry.

While the people will naturally have final say in consumption, it is not to be expected that they should understand even the first rudiments of variety production.

This initial support to the growers has been consistently followed by nation-wide publicity through various mediums, chief among which are the great annual exhibitions such as conducted at Chelsea, Southport, and elsewhere. The prominence given to vegetable exhibits is often quite equal to the floral sections, and the number of Beans shown may exceed 100 distinct varieties in one show. No better means could be devised to educate in such matters the vast public which attends.—Wm. W. C. Carter, Murrumbena, Vic.

COOL STORAGE OF VEGETABLES.

"Will Revolutionise the Industry," states Expert Report.

Market Gardens Near Cities Will be Abandoned.

THE IMPORTANCE OF COOL STORAGE as regards market gardening, is emphasised in a recent report from Canberra.

A forecast is made that within a few years the expansion of the cities will have caused the abandonment of market gardens in the suburbs, according to a special report by the Council for Scientific and Industrial Research.

The report states that market gardening will have to be done many miles from city boundaries, and that it will be found necessary in future years to use cold storage to a very great extent if the city areas are to be supplied with fresh vegetables.

This problem has been tackled by the C.S.I.R., and experiments have shown that under proper cold storage conditions vegetables can be kept in a state of freshness. The necessity for a continual supply of fresh air is stressed.

POTATOES IN N.S.W.

Shortage and High Prices Forecast.

IN the latest report issued by the N.S.W. Dept. of Agriculture, the following is stated:

Rain in the early part of July relieved the dry conditions which were general in coastal areas, but the latter part of July was dry and frosty. Planting of the early crop was in progress in the more northern centres and a larger area than usual was also planted on the Central Coast. It would appear that there will be a shortage of tubers, and any early crops will realise high prices. The purchase of seed has been the heaviest for many years, and there is little doubt that the high rates at present ruling for potatoes has induced many people to consider the planting of this crop, even though they have not done so in the past. "Certified" seed growing organisations produced a larger yield of seed than in any previous season, but stocks were practically depleted by the end of July. In other years seed sales extended for several months longer, which indicates a much bigger area than usual to be planted in the earlier districts.

H. V. McKAY, MASSEY HARRIS PTY. LTD.

Orchard and vineyard implements form a not inconsiderable proportion of the Sunshine and Massey Harris farm machinery exhibit at this year's Royal Show.

Amongst the tyne implements one it attracted to the "Sunglow," a low-wheel cultivator of seven, nine, eleven or thirteen tynes, the tynes being either "spring" or "rigid." Pole and swings or forecarriage can be fitted. Is excellent for orchard and small farm use.

Here is the new Sunshine Power Sprayer, and visiting fruitgrowers will examine it with interest, for users have all reported upon it enthusiastically, stressing low capital cost, economy in petrol, efficiency, and freedom from trouble. The power unit is the popular little SUNDIAL 2 h.p. petrol engine. The pump is of the single action type with porcelain lined non-corrosive cylinder. A feature is the accessibility of its two valves. A large copper tank can also be supplied. The whole plant is mounted on a frame, and can be used from any dray or truck. There is any amount of pressure.

The popular SUNSHINE Spring Tyne Harrow is shown with disc con-

The HOME CIRCLE

OPPORTUNITY.

With doubt and dismay you are smitten,

You think there's no chance for you, son?

Why the best books haven't been written,

The best race hasn't been run.

The best score hasn't been made yet, The best song hasn't been sung,

The best tune hasn't been played yet, Cheer up, for the world is young.

DIETETICS.

Fruit Cocktails Recommended.

By Lois.

WE ARE PRIVILEGED to announce that arrangements have been made for regular monthly articles by "Lois," a well-known dietitian, who will contribute a series of health talks and advice upon "dieting the sensible way," which, we feel will be of great value to our readers, especially ladies. The eminent physician who said "we dig our graves with our teeth," enunciated a truth which we often disregard, and these articles are commended to readers as a means of acquiring the best health possible in these days of extreme physical and mental strain.—(Editor.)

In commencing this series of articles upon the all-important subject of health, may I say that I do so with a desire to help and encourage those of my readers who are still struggling with the problem of ill-health and with all the fear and anxiety that follow in its wake.

I want to assure them that all the suffering and heart-breaks and grief are absolutely unnecessary. There is a clear path to freedom out of it all if we will take the time and the patience to discover the laws which govern life and to prove for ourselves the truth that "Nature knows no incurable dis-ease."

Disease Unnecessary.

Disease is simply the violation of Nature's laws. It is well, therefore, to learn that we can never break those laws without paying for it. We may transgress them if we like, but

not with impunity. It is you and I who do the breaking for such folly. Our advent on this planet requires a physical body which Nature has provided so wonderfully in which our real selves may function and that body is composed of 16 chemical elements which are constantly being used up in the process of living.

These must be replenished through the medium of food, which is the only reason why eating is necessary.

Sixteen Chemicals. These same 16 elements are in the soil of the earth, and are termed Inorganic. The earth is Nature's great laboratory, and these inorganic substances are there compounded, and are absorbed by plant life and yielded back to us in an assimilable organic form in fruits and vegetables, which are man's natural foods.

"Behold, I have given you every herb-bearing seed which is upon the face of all the earth, and every tree, in which is the fruit of a tree-yielding seed; to you it shall be for meat."—(Gen. 1:29)

Slaves to Appetite. We love to believe that we are progressive, and though this may be true in some measure, if we do a little solid thinking we will discover that we are still in slavery. We are slaves to appetites, conventions, habits, etc. The herd instinct has got us, and we won't leave the beaten track. Public opinion counts for so much; we do not dare to be natural. This does not, however, absolve us from the dire consequences that follow such weakness.

The Human Body. The most wonderful machine yet known is the human body, and it is an individual responsibility of each person, yet to the great majority the working of its mechanism is unknown. I think that it would be safe to say that not two in twenty know why we have an appendix, for instance, and most people repeat, parrot fashion, that it is unnecessary in the body. This is an utter fallacy, and at a later period I plan to tell you why it is placed just where it is and what its function is.

First Precautions. Now, if you are interested in this priceless thing called health, and wish to acquire more of it, make a start by eliminating all eating between meals and drink only fruit or vegetable juices. These will supply the bloodstream of your body with the precious organic mineral salts which are so imperatively necessary for the maintenance of good health.

Each month I will give you some tried recipes that I recommend. Cocktails are popular to-day, but, unfortunately those generally indulged in are not the kind which induce good health. The following cocktails will assist, rather than harm, your health.

Cocktail Recipes. Fruit Juice Cocktail: Squeeze the juice of 1 or 2 Oranges and 1 Grapefruit into a glass and add a little cool or warm water.

Vegetable Juice Cocktail: Take several green lettuce leaves, 1 or 2 sticks of fresh celery, half a raw carrot, a little parsley and a small piece of onion; put all through a mincer with a nut grinder attached, be careful to catch all the juice. Strain and press through a wire sieve, add a little celery salt to flavor it and warm gently or drink the juice cold.

Next month I will discuss the blood stream and how its marvellous action can influence general health and how the law operates in spite of our disregard of common sense in the matter of food and drink.

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THE BEST IS ALWAYS THE
CHEAPEST IN THE LONG RUN

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MELBOURNE.

Our Junior Section

My dear Smilers,

Ha! ha! ha! We got a name quickly. Two of my pals sent in the name. Other suggestions came forward, and they were jolly good, too, but we had to make a decision. You see, everyone can be a smiler—little folk, boys and girls, older folk and grandfathers and grandmothers, too. We all like people who can smile. They say a girl can do more with a smile than a man can with half a crown. I know of a girl who was in a hurry to see a train off and she hadn't got a platform ticket, so she gave the porter a smile and was on the station in a jiffy—but don't tell Mr. Clapp about it, please.

What is the longest word in the English language? Answer: SMILES—'cause there's a mile between the first and last letters.

I want lots of letters from my pals. Join the "Fruit World Smilers' Club. Just write into Uncle Joe, give the date of your birthday, and I will send you a packet of seed as that happy day comes round.

Meet me again on this page next month.—Your smiling

UNCLE JOE.

JEAN TELLS ABOUT YENDA (N.S.W.).

Suggests "Smilers" and Gets 5/- Prize.

Dear Uncle Joe,

After seeing your request in the "Fruit World" yesterday, I thought I would give you a short account of Yenda, the town in which I live.

It is situated in the south-east of the Murrumbidgee Irrigation Area, is twenty-three miles from the Murrumbidgee River, and twelve miles from the nearest town, Griffith. Being a very small town, it has a population of about eight hundred.

The chief industry is fruit growing, all different kinds of fruit being grown—Oranges, Apples, Pears, Peaches and many others. Beside fruit, farmers round about grow rice and wheat, for which Yenda is famous. We have a large rice mill right in the town.

I walk three miles to our school, where I am in seventh class. I am thirteen years of age, and my birthday falls on the nineteenth of January.

My hobbies are stamp collecting and pressing flowers. I have only a small number of stamps—thirty. They mainly consist of German, Italian, French and Australian stamps. I have only started both hobbies, so I have only a few pressed flowers, too.

I have not any pets of my own, but we have five nameless black cats. I will write again. I will close now, from your reader,

Jean Smart.

P.S.—I suggest "Merrymakers" or "Smilers" for my name for you to call your "pals," and I hope that it will do.—J.S.

Farm 1924, Yenda, N.S.W., 11/8/35.

(Ha! ha! ha!!! Merrymakers or Smilers? We'll have the shorter and chery name of Smilers, Jean dear, so you get the 5/- prize which I am posting to you. We can all be sinilers, can't we? Wee folk, the bigger ones, youths and grown ups. Thanks for your interesting letter, dear. I am posting you a copy of the "Australian Stamp Monthly" as you are interested in stamps. I've popped your name in my birthday book, too. Write again soon, old dear.—With love, Uncle Joe.)

MARJORIE WANTS A PEN FRIEND.

Dear Uncle Joe,

I read your column in "The Fruit World," and thought that it would be nice to have a penfriend's column in the page, because I could start it off. I would like one in South Africa. I am interest-d in gardening and animals. I also live on a farm: we grow a lot of Apples, Plums and other fruits.

We have just got a new dog and he barks enough, although he is only two weeks o'd.

I must close now.—I remain an Apple Eater,

Marjorie Cowey.

The Patch, Victoria, Australia.

P.S.—I am 14 years old.

(I was in your district recently, Marjorie, and I was charmed with the beauty of the surroundings. There are lovely places in the hills near you. So glad to hear about your doings, dear.

I hope some South African reader will write to you. Perhaps also you would like some Queensland or Western Australian girls to write to you. What is the date of your birthday? We are going to be pals, because I am a great Apple eater too, though I don't mind having a few Pineapples. Watermelons and Oranges as well before breakfast. Always pleased to hear from you.—Much love, Uncle Joe.)

VALERIE FORD IS A SMILER.

Dear Uncle Joe,

I was pleased to see that you have started a junior page in the "Fruit World," and will look forward to reading it every month.

I would be glad to have my name in your birthday book and to have the packet of seeds you mention for my birthday.

Daddy has just finished hearing my spelling for our test to-morrow. We always have a spelling test of a Friday afternoon before we begin our sewing.

I am making Mummy a crazy-work string tin now. I made her a crazy-work saucer last month.

To-day we asked our teacher what we would be making next, and she said we could make a little canvas wallet for ourselves.

Aren't we having nice weather now? We have had too much rain now, D-d said it was hard work dodging all the mud holes in the orchard with the spray pump.

I suggest "Smilers" as the best name for the boys and girls on the Junior Page.—Yours sincerely, Valie Ford, age 8, birthday April 10 Harcourt, Vic., 21/8/35.

(Pleased to have your letter, Val, dear. You are a nice girl. I was so interested to hear of your doings at home and at school. Your name is in my birthday book and I will remember it when that happy day comes. Write again soon—Much love, Uncle Joe.)

(P.S.—I'm sending you 5/- as well for our name, "Smilers.")

A CHERY LETTER FROM JUNE.

Dear Uncle Joe,

I have thought of lots of names for you to call us by, but the name which I think is most suitable is "Blossoms." I would just love to be called a blossom, not only because we live on orchards where all the blossoms, are, but because the very word "blossom" makes one think of spring-time and blue skies and sunshine, which everyone likes to think of when skies are grey.

SUBSCRIPTION ORDER FORM

To the Manager,
The "Fruit World"—

Sir—Enclosed please find remittance for a year's subscription to the "Fruit World & Market Grower," commencing with the next issue.

Signed

Address (full postal)

Date

SUBSCRIPTION: 6/- Per Annum, post free. 7/6 including the "Fruit World Annual."

Address all Correspondence to Box 1944, G.P.O., Melbourne, Vic.

VICTORIAN OFFICE:
8-10 Orr St., off 78 Victoria St.,
Melbourne, Vic.

N.S.W. OFFICE:
439 Kent Street,
Sydney.

I am thirteen years of age and my birthday is on September 16. I like living on an orchard because each year I can look forward to the ripening of the new season's fruits. To-day I walked amongst the rows of Plums. They were heavy with creamy blossoms and when the wind blew down the rows the petals fell like snow. I always envy the bees at work amongst the blossoms, don't you?

Each January, when it is Apricot time, I hunt for the first ripe Apricot. Somehow no other Apricot tastes exactly like the first one I eat. Do you know the Mansfield Apricot? It is the large kind, and when it is very ripe it is delicious (am I making your mouth water, Uncle Joe?)

To-day is a "blue" day, one which makes me feel that winter has all past. Major, my big dog, is lying stretched out, sound asleep with the hot sun bleaching his red curly coat. Major is an airdale, and Tim a fox terrier, and they have both been away hunting together. The heavy rains have flooded the rabbits out of their homes, so I think it must have been good hunting, and they are both looking tired, and contented, too.

Could we have a painting competition each month, Uncle Joe? I love painting, and I guess lots of your other pals do, too.

I was quite excited when I found there was a Junior Section in the "Fruit World," and I am going to enjoy reading the page every month. Cheerio,

From your sincere pal,
June McKinnon.

Hastings, Vic., August 14.

(We are going to be good pals, June. Your letter was jolly nice and newsy, and I shall always be pleased to hear from you. I've noted your birthday in "Birthday Book," and will send you a packet of seed when that happy day comes round. I liked your idea of a pet name, but you will see the Editor decided on "Smilers." I'll be thinking of you when Apricot time arrives. The Mornington Peninsula is famed for its 'cots. I will think over the idea of a painting competition. What do my other pals think of the idea.—Much love, Uncle Joe.)

MUST HAVE BEEN TOPPED.

Teacher: How many do five and five make?

Class: Ten, teacher.

Teacher: Now, Willie Jones—when you've finished giving that fly a bath in your inkwell—if your brother had ten Apples and gave you five, would that be half?

Willie Jones: No, Teacher.

Teacher: Eh! What's that. How do you make that out?

W.J.: Please Teacher, he'd give me the five smallest!

APPLE-WIPING MACHINE.

The Centenary Apple-wiping Machine, invented by Mr. E. G. Phillips, of Croydon, Victoria, has proved to be efficient: it is popular among growers around Croydon and other districts where installed. In the Croydon Packing Shed, 6,500 cases of Apples of all commercial varieties were put through the machine satisfactorily.

Examination of the fruit revealed that the wiper had removed the spray residue not only from round the circumference, but also from the calyx and stalk ends: further, owing to the polishing action of the machine, the appearance of the fruit is improved. In order to make tests as to arsenical residue, average samples of the wiped fruit were sent to the authorities, with the result that the fruit easily passed the export test. The average speed of wiping, by hand power, is 35 cases per hour.

Mr. Phillips advises that he is demonstrating the machine in fruit-growing districts by arrangement, but that the machine will not be on view at the Melbourne Royal Agricultural Show.



Wait for "WEIGHT GRADING" at the Melbourne Royal Show

SEE THE "OXLO" (SIZE BY WEIGHT)

GRADER
on Stand 142
FOR ALL FRUIT

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Prominent N.S.W. Trader.

The first president of the N.S.W. Chamber of Fruit and Vegetable Industries, Mr. L. J. Jenkins, is well known in the Sydney fruit trade, and has business connections throughout Australia. The following sketch of his career will be found to be of interest:—

Leslie James Jenkins, born 20/1/1886, entered business of father, Mr. John Jenkins, 1900.

At age of 12, prior to going to school in morning, went to city early with father and collected orders from Australia Hotel and other leading hotels.

At that time there was only one 'phone in the Fruit Exchange and that was in the office of Mr. Chas. R. Barton—now one of the best known customs and forwarding agents of this city.

All persons and firms trading in the Fruit Exchange used this 'phone at that time—the charge was 6d. for a call, 3d. to receive a message, which Mr. Barton used to have delivered.

In 1905, L.J.J. made his first business trip to Tasmania and Victoria, and continued to make at least one annual visit in pursuit of business, resulting in a greatly increased trade of the father business.

Since 1908, when L.J. was assistant hon. secretary of the Trade Association, he has taken an interest in trade matters, holding executive office in every association that has functioned in the fruit trade of Sydney.

In 1912, joining the Sydney Chamber of Commerce representing his father, John Jenkins. In 1919-1920 he was elected chairman of the Fruit Section of that Chamber, and was again elected chairman of this section in 1933/34, and still holds that office.

In sport, was secretary of cricket and tennis clubs, and assisting in arranging many social games between members of the fruit trade and other bodies.

In municipal spheres—was elected Alderman of Willoughby Council in 1931, and held office for a term of three years, retiring at the end of that period in 1934, upon medical advice.

Mr. L. J. Jenkins



In 1928 was elected to the Council of the Sydney Chamber of Commerce, and held office on that Council for four years.

In 1928 was elected to the Rotary Club as a representative of the trade, holding the classification of Fruit and Vegetable Distributing, which classification he still holds.

In 1928/29 and again 1929/30, he was elected as president of the Fruit and Vegetable Agents and Merchants' Association, which Association the N.S.W. Chamber of the Fruit and Vegetable Industries has superseded.

L.J.J. is the managing partner of the firm of Messrs. John Jenkins, and the other principals of the firm being his two brothers, E. A. Jenkins (Barney), and Geo. E. Jenkins. Two brothers served in France until the end of the War, returning home early in 1919. The business was taken over by the three brothers in 1925, upon the death of their father, the late John Jenkins.

An interesting fact about the firm is that it was founded in 1847 by the grandfather of the present principals who was a grower on the Lane Cove River, N.S.W. In 1866 his son, John, was taken in to help in the business, and in 1883-52 years ago, the late John Jenkins took over the entire business and changed the name from Thomas Jenkins to that of the present firm name, John Jenkins.

NEW SOUTH WALES.

Leeton Withdraws from N.S.W. Fruitgrowers' Federation.

As we go to press advice is to hand that at a specially convened meeting of the Leeton fruitgrowers at the end of August it was unanimously decided to withdraw from the N.S.W. Fruitgrowers' Federation. Leeton is opposed to the proposed Fruit Marketing Organisation Act.

Our Fruit in London.

Reward of Limiting Exports.

Apples Enjoy a "Year in Plenty" — Canned Fruit Also Has Great Run.

By L. Bruce Purton (Special Correspondent of the "Fruit World and Market Grower.")

LONDON, July 27, 1935.

INTERVIEWS with fruit experts on this side of the water convince me that Australian exporters of both canned and fresh fruits have nothing to complain of as far as the 1935 season is concerned.

A man who has been in the Australian fruit trade here all his life, assures me that 1935 has been "a year in twenty" for Australian Apples. He put forward a number of reasons for this happy state of affairs. In the first place he said: "The satisfactory market for Australian Apples this year is almost entirely due to the restricted quantities sent from Australia. They have shipped about a million cases less this year than has been their habit. But the exporters have not lost anything. In fact, they have gained. They have actually got more for the restricted quantity than they would have received if they had shipped the whole lot."

He went on to praise the wisdom of Australian exporters for eliminating certain grades, varieties and sizes.

Prices have been ranging from 10/6 to 14/- a case, according to the variety and the State whence they came. Granny Smiths have been fetching from 15/- to 16/6 a case. At the moment of writing, however, these prices are beginning to wane, because of the arrival of several shipments of Virginian barrelled transparents. These are fetching 22/- a barrel, which means they will be retailed at 3d. a lb., whereas Australian Apples are being sold to the public from 4d. to 6d. The arrival of these cheaper Apples has virtually broken the market, but not before the Australian stocks had been practically exhausted.

Western Australian Apples were said to be the pick of the Australian crop this year, while Victorian Apples were said to be not up to the usual high standard of that State.

Tighter Packs in Better Boxes.

I have heard a good deal of praise about the improved packing methods adopted by Australian exporters. Apples this year have been tighter packed, which is all to the good. The adoption also of Canadian whitewood boxes has been much appreciated by wholesale buyers on the London market. Practically all Australian States are now adopting this pack with the exception of Western Australia, and I am told that it would be unwise for that State to make any change. Apples from Western Australia are known by their redwood box, not only to wholesalers, but also to retailers. Housewives, I am informed, often ask storekeepers for "the Apples in the red box." So it would be foolish to lose this valuable bit of psychological selling propaganda. At the same time, Western Australia is using its own timber instead of having to import it.

Failures Elsewhere Help Australia.

Another reason why Australian Apples have "got away with it" to such purpose this year, is that other crops have failed in other parts of the world. This has naturally had its effect on the sensitive London market. I refer to the failure of the English Strawberry crop, and of other soft fruits, both in England and on the Continent. An ill wind also withered up the Spanish Orange crop, but it blew Australian Apples some good.

In the various quarters I have moved about making enquiries, I have not heard a single complaint on the score of quality. There have been complaints from Glasgow (where, incidentally, Australian Apples have been realising 1/- a case more than in London) about Australian Apples suffering from scald. No blame, however, can attach itself to Australian exporters for this. Investigations have clearly proved that the Apples in question were put into cold store in a humid condition—hence the scald.

[Canned fruits also had "a great run." Particulars are given on the canned fruits page in this issue.]

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N.S.W. Representatives.—Macdermott & Sheedy, Municipal Fruit Markets, Sydney.

West Aust. Representative.—A. Hicks, 18 William Street, Perth.

Victorian Representatives.—Messrs Gollin & Co. Pty. Ltd., 561 Bourke Street, Melbourne.

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All Orchard Requirements.

MELBOURNE SYDNEY

NEWCASTLE DEVONPORT

Australian Apple and Pear Export Council

Annual Meeting, Hobart, Commencing October 28.

Apple and Pear Grading Regulations—Uniformity of Federal and State Designations — Varieties for Export—Should there be Further Elimination of Varieties? — Markings on Cases of Pears.

The marketing of fruit in Australia will also be considered.

MANY IMPORTANT ITEMS are listed for discussion at the forthcoming annual meeting of the Australian Apple and Pear Export Council, which is to be held at Hobart commencing on Monday, October 28 next.

Delegates will be in attendance from all the Australian States.

The president, Mr. J. B. Mills, is at present in England, but he will be back in time to preside over the conference.

The official opening will be performed by Hon. R. Cosgrove, M.H.A., Tasmanian Minister for Agriculture

Preliminary Agenda.

Among the items listed for discussion are the following:—

Overseas Freight and Shipping Programme:—

- Review of 1935 season.
- Co-operation with New Zealand—Report of delegation.
- Report re Apple freights.
- Reduction of freight on Pears —(Vic. Fruit Marketing Association).
- Relief grant on 1935 shipments.

Apple and Pear Export Grading Regulations.

- Amendments desired.
 - Varieties for export.
- Apple Export Case.

Pear Export Case:—

That the Apple and Pear Export Council discontinue the use of the "three-quarter" bushel case for Pears in favor of the standard north-west bushel case —(N.S.W.).

Faulty Carriage of Pears:—Litigation in Australia.

Empire Fruit Marketing:—Report to date.

Organising the Australian Apple Market:—

- Statistics.
- Apple Advertising Campaign.
- Report of W.A. Apple Sales Board.

Empire Producers' Conference—London, 1936.

Inspection Levy — Advertising and Finance for State Associations.

Trade with the East: — Eastern Trade Commissioners appointed.

Thrips Investigation League.

Compensation for reworking fruit trees.

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Solicit consignments of Apples, Pears, Etc.

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International Fruit & Mercantile Company Ltd., Melb., Vic., Australia;
Pitts & Lehman, 129 Pitt St., Sydney, N.S.W.; and A. J. Walshe & Co., Hobart, Tasmania.

(Later.)

The Tasmanian State Fruit Board has submitted the following items:—

Consideration of the Constitution of the Council—(a) Finance. (b) Voting power of the States. (c) Voting power of the shippers.

Consideration of no further elimination of varieties.

Consideration of the elimination of color grading of the even-colored varieties of Apples from the fruit export regulations, and the reclassification of the "Sturmer" as a dual purpose Apple.

Consideration of the reorganisation of the quota system.

Consideration of representation on the Australian Oversea Transport Association.

Federal and State Apple Grades.

Mr. J. M. Ward, Superintendent of Horticulture (Victoria) writes:—

I am of opinion that, in view of the fact that the export grade designations of Apples and Pears have been altered from "Special" to "Extra Fancy," and "Standard" to "Fancy," and the standards have been somewhat amended, the question of altering the State designations and amending the grades should be considered at the forthcoming conference, so that we can as far as possible have uniformity with both export and State grade standards.

Mr. F. E. Ward, Director of Agriculture, Tasmania, submits the following:—

Classification of Varieties.—It is suggested that the classification of varieties permitted for export be reviewed in order to remove certain anomalies existing under the present schedule, viz:—

Experimental. This term is most misleading, and should only be applied to new or recently introduced varieties, for which a permit is obtained for the shipment of small lots on purely an experimental basis. Varieties coming under this classification would comprise Grimes Golden, Rainier, Melba, Golden Delicious, Crimson Cox.

Apples such as Coleman, King Cole, Stayman, Wellington, which are already cultivated, and have been shipped overseas for some years, would be better classified under the group they represent, i.e., for which a special permit must be obtained. These could be indicated in the schedule by the abbreviation S.P.

Certain minor amendments to the color grading requirements are also suggested, viz., French Crab. The "even color" requirements for this variety in the "Ex. Fancy" and "Fancy" grades tend to misrepresent the quality of consignments.

From a color viewpoint, "green" fruits are favored and are generally considered of better quality than those that are yellow or turning yellow. It is suggested that green fruits be placed in the "Ex. Fancy" and colored fruits in the "Fancy" grade.

Sturmer Pippin. A larger percentage of blushed fruits are experienced with this variety, but as it is not entirely a dessert Apple, it is suggested that blushed Apples be packed in the "Ex. Fancy" grade or permitted to be included in the "Fancy" grade.

It is also suggested that as Sturmer Pippin is both a culinary and dessert Apple that it be transferred to the "dual purpose" class, with a size limit for export of 3-inch.

TOMATO LEAF MOULD.

A proved remedy for Tomato leaf mould is Colloidal Sulphur, 1 lb. to 50 gallons, when plants are young then spray again immediately any sign of the disease appears, and again two weeks later if still in evidence.



"Two Bays" Cider maturing in I.F.M. Co.'s storeroom.

Do not run any Financial Risk with your Fruit
but Consign it to

HEDLEY GEEVES PTY. LIMITED

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(Hedley Geeves, Managing Director)

Registered Shipping No. 6.

FRUIT EXCHANGE — BRISBANE

SELECTED AGENTS FOR:

Victoria: Harcourt Fruitgrowers' Progress Assn. Ltd.
Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board.
New South Wales: Griffith Producers' Co-op. Co. Ltd.
Batlow Packing House Co-op. Soc. Ltd.

SPECIAL NOTICE TO FRUITGROWERS

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under
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Wholesale Fruit Merchants' Association of Victoria
the following list is given. All are members of the above Association, and are registered firms carrying on business in the

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H. L. E. LOVETT & CO. (23).
A. E. PITT (14).
J. DAVIS PTY. LTD. (8).
W. S. TONG (31).
SILK BROS. PTY. LTD. (24-25).
J. G. MUMFORD (35).
GOLDEN VALLEY FRUIT CO. PTY. LTD. (15).
J. W. ROSS (13).
H. M. WADE & CO. (21).
DAVID SMITH PTY. LTD. (3).

SILBERT, SHARP & DAVIES PTY. LTD. (17).
W. A. WATKINS (5).
P. A. PATRIKEOS (36).
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F. CAVE & CO. PTY. LTD. (9).
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HERBERT WILSON PTY. LTD. (10).
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Office: 21 Wholesale Fruit Market,
Queen Street, Melbourne. Phone F 4866.

Correspondence is invited by the Association.

MARKET NOTES AND PRICES

SYDNEY'S NEW MARKETS.

To Cost \$125,000.

It is estimated that the new municipal markets at Sydney will cost \$125,000 for new buildings alone. A considerable amount of money will also have been spent by the City Council in acquiring land for the extensions. The organisations representing the growers and sellers of fruit and vegetables are being consulted concerning the erection of the new buildings, and a conference will be held shortly to which these bodies and the Master Fruit Carriers' Association will be invited to attend.

Suggestions will be offered at the conference for consideration by the City Council on behalf of growers and agents for the best facilities in the marketing of produce. A suggestion from the N.S.W. Chamber of Fruit and Vegetable Industries will probably take the following form—The fruit market to be transformed into an island market around a cool store; the conversion of the present

Potato market into a fruit market; the vegetable market to be utilised by vegetable growers only; a market to be erected on the Hay-street frontage to accommodate vegetable and Potato agents, and adequate parking space and wider roadways than at present contemplated.

N.S.W. CHAMBER OF FRUIT AND VEGETABLE INDUSTRIES.

DURING AUGUST much activity was displayed by the N.S.W. Chamber of Fruit and Vegetable Industries, calls having been made on the State Governor, the Premier, the Minister for Agriculture, heads of Government departments, and municipal authorities.

Sectional committees have been formed for Strawberries, Bananas, tropical fruits, citrus, Apples and vegetables.

Regarding the Sydney Markets the chamber recommended (1) That the present fruit market be transformed into an island market by continu-

ing Hay-street round the cool store end of the market, connecting up with Ultimo-road via Wheat-road; (b) Converting the present Potato Market into a fruit market for the occupants of the present temporary structure; (c) the present vegetable market for vegetable growers only; (d) a market to be erected at the Hay-street front of the resumed area for vegetable and Potato agents; (e) adequate parking facilities.

The chamber is co-operating with the N.S.W. Fruitgrowers' Federation in seeking the lifting of the N.Z. citrus embargo. Mr. Forbes, N.Z. Prime Minister, was interviewed.

Regarding the proposed Marketing Act the chamber is seeking representation, because of its effective contact between growers, distributors and the public.

MOSS AND WOODWARD.

The firm of Moss and Woodward, which had been carrying on business as fruit agents at the Sydney Markets, has been dissolved, and Mr. H Woodward is carrying on in his own name. His advertisement will be seen on the Sydney Markets page.

DEATH OF ROY BLACK.

The death of Mr. Roy Black, on August 4, cast a gloom over the Sydney Fruit Markets. For many years he had been the controlling head of the firm of H. Black & Son and was a popular figure in the fruit trade. A few days before his death, Mr. Black was attacked by the 'flu germ. Pneumonia supervened and he quickly succumbed. The deceased was 42 years of age and enlisted in 1915. He was on active service un-



The Late Mr. Roy Black.

til the war terminated and there is little doubt that his sudden demise was due to the fact that he had been badly gassed in France and had no resistance left when pneumonia developed. Roy Black leaves a wife and daughter. His brother Mr. Stan Black and the latter's son will continue to carry on the business of H. Black & Son, farm and produce agents of the City Markets.

FRUIT INSPECTION AT SYDNEY MARKETS.

The methods of some fruit inspectors at Sydney Fruit Markets are very irritating at times, and in one instance recently, a whole consignment of Washington Navels was held up for two days because an inspector noticed some of the fruit affected slightly with red scale. The consignment referred to was a particularly good class of Navel, well packed and graded, in sizes varying from 64 to 100. There was a good sale for this fruit at 7/6 to 8/- per case, when the inspector stopped the sales and ordered the agent to repack the whole consignment, leaving out the affected fruit, which had to be cleaned before being sold. The sale of the consignment was therefore lost at the prices quoted, and the grower put to the expense of repacking charges. Very little of the fruit was affected by the scale, and these were confined to two cases after the repacking had been completed. As the waiting buyers were quite willing to clean the affected fruit before exposing them for sale in their shops, it seems a little unreasonable for an inspector to hold up the sale of the fruit and put the agent and his assistants to the trouble of opening up the whole consignment.

The loss of time this means, and the loss of the sale at good prices, does not make for that feeling of friendliness between agents and inspectors, which should exist at all times. Both have a duty to perform and it should be done with that degree of reasonableness which makes for good fellowship.—J.L.C.

Business Changes.

McKEE, GEORGE (Vera M. and John B. McKee), Spurway-street, Ermington, N.S.W., plant nursery. On 1/7/35 John B. McKee retired. Registered 31/7/35.



F. Chilton, Established 1894.
Fruit Commission Agent,
Licensed Under Farm Produce Agents' Act.
Highest Market Prices, Prompt Returns, Reliable Advice.
Registered Address for Telegrams and Cables—"Chiltons."
City Fruit Markets, Sydney.

FRUITGROWERS!
For Satisfactory Results, Send Your Fruit to
F. H. G. Rogers
Fruit Selling Expert.
Municipal Markets, Sydney.
Shipping No. 83. Established 1900.

Consign to...
J. G. R. BRYANT
Licensed Farm Produce Agent,
City Markets, Quay Street, Sydney.
Registered Office: Haymarket Chambers. P.O. Box 175 Haymarket
Bankers—Commercial Bank of Sydney.
Shipping No., All States, 250. Haymarket Branch.

Growers Obtain Top Prices by Consigning to:—
H. J. GREENTREE
(Est. 1920)
MUNICIPAL MARKETS, SYDNEY.
Shipping Nos.—Tasmania 228, Q'land & Victoria 40.
Phone: MA 1769.

H. P. WOODWARD
Licensed Farm and Produce Agent,
City Fruit Markets, Sydney.
£1,000 Fidelity Bond. References, Bank of N.S.W.
Telegraphic Address, "Woodward." Code, Bentley's.
SHIPPING NO. 281.
Phones: MA 2612 and K2317.

Telephones: MA 4432, Epping 840. Est. 1896.
Bankers: Bank of N.S.W., Haymarket.
H. BLACK & SON,
Licensed Farm Produce Agents,
17 City Markets, Sydney.
Consignments of Fruit, Tomatoes, and Other Produce
Received for Sale.
Cases Sent on Application.
Cash and Account Sales Rendered Weekly.

FRUIT GROWERS—Seeking Expert Salesmanship,
Satisfactory Results and Prompt Returns,
CONSIGN YOUR FRUIT TO
L. SMITH
Licensed Farm Produce Agents.
Bank References: Commercial Bank, Elizabeth Street,
and N.S.W. Fruitgrowers.
Shipping No. 235. Phone: M 3045

Telephone MA 3846. Established 1900.
W. MUSGROVE & SON
Licensed Farm Produce Agents.
8 City Fruit Markets, Sydney.
Our Motto—Quick Sales and Prompt Settlements.
Forwarding Numbers:
Tasmania, Victoria, S. Australia, No. 53.
Queensland, Northern Rivers, No. 18.

GROWERS!—Consign your Fruit to—
JAMES SLATER
21 CITY MARKETS, SYDNEY.
Postal Address: Box 36, Haymarket P.O., Sydney.
Established 1882.
SHIPPING NO. 19. 88 VIC. & TAS.
Stencils, Advice Notes, etc., on Application.

Associated Growers' Selling Agency
Licensed Farm Produce Agents.
CITY MUNICIPAL MARKETS.
BRUCE R. SMITH, Proprietor.
Reliable Service, Prompt Advice and Returns.
Highest Ruling Rates.
Phone: MA 1828.

CONSIGN YOUR FRUIT TO
HOPKINS & LIPSCOMBE
Proprietor: STANLEY H. FOGSON.
LICENSED FARM PRODUCE AGENT.
MUNICIPAL MARKETS, SYDNEY.
PROMPT RETURNS. SHIPPING NOS.—
58 Vic. and Tas., 68 Q'land.
Bankers: Bank of N.S.W., Haymarket, SYDNEY.

SYDNEY —
The Leading Market
for Australian Fruit
The Commonwealth Trade Port for
the Pacific and Eastern Trade

Market Notes and Prices

(Continued from page 36.)

VICTORIA.

Market Report for August.

THE weather fluctuations reflected similar conditions in fruit sales in the Victoria Wholesale Markets during August. A week of delightful weather in the middle of the month caused an increase in demand for all varieties, but a recurrence of wintry conditions in the last week was responsible for the activity receding. On the whole, August was generally slow, but the demand kept up fairly well with supplies.

Ordinarily, citrus generally moves satisfactorily in August, but the weather this year was largely against any marked activity. Prices remained normal, however, and the improved prospects for settled weather seem to promise clearance in the next week or two.

Individually all lines were steady, without any outstanding report being received. Tomatoes from Adelaide came on to the market during the month; quality and color were satisfactory, and prices were firm, with a resultant good business being reported.

The greatest fluctuations were noticed in Potatoes. Prices varied from day to day, as much as 30/- per ton difference during the month being quoted. An average of £10 over the whole month being the approximate value.

Supplies of vegetables were short on the whole, with prices not particularly influenced. Peas and Beans supplies were short, with corresponding prices above the average. Pumpkins were scarce, and prices high. Onions were short, and averaged about £9/10/- throughout the month.

Melbourne (29/8/35).—The following prices were quoted by the Wholesale Fruit Merchants' Association (Per Case): Apples, 4/- to 7/-, few higher; cooking, 2/6 to 5/-. Bananas, double case, green, 8's and 9's, 12/- to 13/-, few higher; 7's to 6's, 8/- to 11/-. Custard Apples, 4/- to 6/- 1/2 case. Grapefruit, 4/- to 7/-, few higher. Lemons, 4/- to 7/-, few higher. Mandarins, 4/- to 8/-, special higher. Oranges, Navel, average standard, 4/- to 5/6; selected, 6/- to 10/-. Passion-fruit, 14/- to 20/- case, special higher. Pappaws, 8/- to 12/- double case. Pears, 4/- to 6/-, few higher. Pineapples, 7/- to 9/- double case. Tomatoes, West Aust., repacked, ripe, 10/- to 12/-, choice higher, half case; do., Queensland, 8/- to 10/- S. Aust., best, 16/- to 17/-, few higher.

The Melbourne market manager of the Federal Citrus Council of Australia reports sales were as follow:—

Washington Navel Oranges, average standards, 75-84, 4/-; 126 up, 5/-; a few, 5/6, faulty lower; M.I.A. standards, to 7/-; selected standards, 9/-, best counts; a few 10/-; few specially selected wrapped higher. Common Oranges, good standards, 4/- and 5/-, best counts; selected standards, to 5/- and 6/-, best counts. Grapefruit, slow, average standards nominally 4/- to 6/-; selected standards, to 7/-; a few specially selected higher. Lemons, good standards, 7/-, best counts; small sizes, from 3/-; selected standards to 6/-, few 7/-. Seville Oranges, smooth, canned, 60-75, to 6/- and 7/-; smaller, nominal, to 4/-. Mandarins, Emperors, 180-225, 7/- and 8/-; 280, 5/-; 300, 4/-; smaller, from 3/-; a few specially selected, to 9/- and 10/-.

the representation of a crown, which occupies the central position of the design—above and between the large initials "G" and "M"—no fewer than 1,800 flowers were used!

Some distance to the left and right appeared flower-garlanded photographs of their Majesties' heads—the King to the left, the Queen to the right. The words "Loyal Greetings" in flower letters 3 ft. in height extended some 40 feet across the design, directly above the two immense dates "1910" and "1935" also represented by cleverly-arranged flowers.

At night these decorations made a particularly attractive and impressive sight, illuminated from below by powerful flood lights.

JUBILEE WEEK IN LONDON!

Commercial buildings of the City and West-End flag-bedecked and gaily festooned—a city of carnival—a wondrous and unforgettable transformation fully worthy of perhaps the happiest occasion the Empire has ever known.

Among the dazzling galaxy of decorative tributes to their Majesties, the front of Dan Wuille & Co.'s headquarters in Long Acre was outstanding for its restrained dignity, beauty and good taste.

Flowers supplied an appropriate motif for this magnificent display and simplicity was the keynote. In



Dan Wuille's Jubilee Floral Display.

NEW SOUTH WALES.

Sydney (27/8/35).—Mr. L. T. Pearce, Market Representative, Fruitgrowers' Federation of N.S.W., reports as follow:—Apples: Buncombe, 6/6 to 11/-; Cleo., 5/6 to 9/-; Crofton, 6/6 to 10/-; Del., 7/- to 15/-; Demo., 6/6 to 9/-; French Crab, 5/- to 7/-, few 9/-; G. Smith, 9/- to 11/-, few 12/-; Jon., 7/- to 10/-; L. Pippin, 4/6 to 6/-, few 7/-; R. Beauty, 7/- to 11/-; Scarlet Pearmain, 6/- to 8/-; Statesman, 6/6 to 10/-; Sturmer, 5/6 to 8/-; Yates, 6/6 to 10/-. Pears: Jos., 8/6 to 13/-; Packhams T., 9/- to 13/-, few 15/-; W. Cole, 9/- to 13/-; W. Nelis, 8/- to 12/-.

Comments on the Apple and Pear Position: Due to the continuance of the shipping strike no Tas. Apples and Pears arrived this week. Vic. supplies per rail were heavy, with R. Beauty, Jons., and Yates comprising the chief varieties. During the week Pears steadily firmed to the prices quoted.

Bananas: N.S.W. and Queensland, 7/- to 16/- trop. case, Norfolk Is., 7/- to 10/-, Fiji 16/- to 20/-.

Citrus.—Grapefruit: (N.S.W.), Inland, 5/- to 8/-, few 10/- bushel; local, 2/- to 5/-, few special to 12/-. Lemons (N.S.W.), 1/- to 5/- bushel; Mandarins, Emperor (special), 5/- to 9/-, few 12/- bushel. Navels, N.S.W., 2/6 to 8/-, few 9/-.

Comments on the Citrus Position: Lemons: The position remains unchanged. Mandarins: Cases containing more than 300 in count are impossible of sale generally. Navels: Slightly improved values were experienced late last week, but prices eased again. Other Oranges: Only special quality fruit is required in these varieties, and large size is essential.

Papaws (Q'land), 8/- to 11/-, few 12/- trop. case; Passionfruit, N.S.W., 6/- to 9/-, few special 12/-, inferior lower, Q'land, 7/- to 9/- half bush. Pineapples (Q'land), Queen 7/6 to 12/- trop. case. Tomatoes (Q'land), green 4/6 to 7/-, few 8/- half-case, special colored to 10/-, repacked 7/- to 10/- half-case.

COOL STORES FOR SYDNEY FRUITS MARKETS.

The need for cool stores in the vicinity of the city Fruit Markets has long been manifest, and recently a company was formed for the purpose of erecting cool stores on the latest model on land situated close to the Darling Harbor goods railway line, and adjacent to the markets. The site is an ideal one for the purpose, and will suit fruit merchants carrying on business at the markets. Many leading fruit merchants are financially interested in the venture, and growers have also been invited to participate.

AUSTRALIAN ORANGES IN LONDON.

London, Aug. 14.—Oranges per "Ot-ranto" sold as follow—N.S.W. Navels 11/- to 13/- case, others 9/- to 11/-. Lemons, wasty, Sth. Australian Navels, 14/-; occasionally 15/-.

WESTERN AUSTRALIA.

Perth (23/8/35).—Apples: Dunn's Seedling, dumps, 3/- to 9/-; R. Beauty, dumps 6/- to 9/6; Yates, dumps, 3/- to 13/- (special to 15/-); G. Smith, dumps 5/- to 13/- (special to 15/6); Cleo., dumps, 3/- to 9/-; Doherty, dumps 3/- to 12/3; Del. dumps, 8/- to 12/6; Rokewood, dumps, 6/- to 8/6. Citrus.—Oranges: Vals., flats, 2/- to 3/-, dumps, 5/- to 6/-; Navel, flats, 2/- to 3/3; dumps, 3/6 to 10/6. Lemons: 1/6 to 3/6 (special to 5/6). Mandarins: 3/- to 10/9. Other Lines: Pears, dumps, 9/- to 12/6; Passionfruit, 4/- to 8/-; Tomatoes, smooth skin, to 13/9, others, 2/6 to 11/-; Bananas, prime, 22/- to 27/6 crate; small, down to 16/-.

Herbert Wilson

Pty. Ltd.

Wholesale Fruit Merchants and Commission Agents

Nos. 1 and 10 Wholesale Fruit Market Melbourne.

Accredited Agents for Victorian Central Citrus Association and Affiliated Association.

Bankers: National Bank of Australasia, City Telephone F6444.

(Western Branch) Private Phone: M3055.

TASMANIA

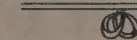
Leading Australian Firm of Fresh Fruit Exporters. Manufacturers IXL Jam and Canned Fruits. Hop Factors—Largest Cool Stores for Hop Storage in Commonwealth. All Orchard Supplies available at all times.

Agents for—Associated Evaporated Apple Manufacturers, Eagle, Star & British Dominions Insurance Co. Ltd., Federal Steam Navigation Co. Ltd., Scottish Shire Line of Steamers, Osaka Shosen Kaisha.

Correspondence Invited.

H. JONES & CO. PTY. LTD. Hobart.

Ship Your Oranges, Lemons, Grapes to New Zealand



All consignments for this market will have careful attention and realise highest prices if sent to

The Co-operative Fruitgrowers of Otago Limited, Dunedin

PERSONAL SUPERVISION OF EVERY CONSIGNMENT.

Cheques posted promptly.

Drop us a Line or Cable: "Peachbloom," Dunedin.

Highest Prices.

A. S. BARR

Prompt Returns.

FRUIT EXCHANGE, BRISBANE, QUEENSLAND. Wholesale Fruit Merchant and Growers' Agent.

A Trial Solicited. Returns Speak for Themselves. Shipping No. 19. Established 1888. Registered Telegraphic Address: "Barr, Brisbane."

ROBSONS LIMITED

(Wm. Robson, Managing Director.)

Guarantee Satisfaction to Clients. Send us a Trial Consignment.

FRUIT EXCHANGE, BRISBANE, QUEENSLAND.

Account Sales and Cheques Sent Promptly. Shipping No. 28.

SOUTH AUSTRALIA.

Adelaide (28/8/35).—Apples (eating), 8/- to 9/- case; do. (cooking), 6/- to 8/-; Bananas, 16/- to 20/- crate; Lemons, 4/- to 5/- case; Oranges (Common), 3/- to 4/-; do. (Blood), 4/-; do. (Mandarin), 8/- to 10/-; do. (Navel), 5/- to 7/-; do. (Poorman), 4/-; Passionfruit, 20/- case; Pears (eating), 10/-; do. (cooking), 5/-; Pineapples, 14/-; Quinces, 7/- case; Tomatoes, 14/- to 16/- half-case.

QUEENSLAND.

Brisbane.—Messrs. Robsons Pty. Ltd. report under date August 23 as follows:—Citrus has been selling freely, choice Glen Mandarins realising to 15/-, other varieties selling at the following rates:—Emperors to 13/- and Scarlets to 12/-. Navels are realising to 9/-, and Common Oranges to 8/-.

The "Ngatoro" discharged a total of 17,000 cases this week, and choice Apples sold freely, the following being a brief summary of values:—Jons, Crabs, Croftons, Demos., and

Cleos., to 10/-; G. Smiths, to 12/-; Scarlets and Sturmers, to 9/-.

Pears are in keen demand, Coles and Jos. selling to 16/-, W. Nelis to 15/-.

Smooth-leaf Pineapples are realising to 6/- per case, and roughs to 5/6.

Custard Apples are now just about finished, odd lines realising to 3/- case.

Choice Lemons are realising to 13/-.

Good quality Tomatoes are selling freely, colored selling to 6/6 and green to 5/6.

All lines of vegetables are clearing well, Cabbage to 4/- per dozen, Cauliflowers to 12/- doz., Beans 10/- bag. Local sales have not been very brisk this week, on account of the Royal National Association holding its annual exhibition, and also we are experiencing showery weather.

Messrs. Clark & Jesser, of Brisbane, report under date August 20 as follows:—During the past month our market has been well supplied with eating Apples, as in addition to heavy supplies from Tasmania, Victoria has also been supplying fairly heavily. The ruling prices at present are:—Jons, 9/- to 10/-, other colored varieties of 2½ and 2¼ sizes 8/- to 9/-. Sturmers have been slow of sale at 7/- to 7/6. A big percentage of the Tas. Apples coming forward are of very large size, and these are not meeting a good demand, the prices ruling being 6/- to 7/-. Cooking Apples are scarce, and G. Smiths at the present time are worth 12/-, French Crabs 9/- to 10/-.

Pears are also very scarce, and high prices have ruled throughout the month. Owing to the non-arrival of a boat from Victoria last week our market is at the present time completely bare; and supplies due to arrive this week should touch the highest prices yet reached this season.

AUSTRALIAN AND N.Z. APPLE SALES.

London, August 3.—Apples in the "Baradine" and "Chitral" were sold as follow:—Tas.: Sturmers 9/- to 13/3, Crabs 8/- to 11/3, Yates 10/9 to 12/6, Democrats 9/- to 13/6, Rokewoods 12/- to 14/6. N.S.W.: Granny 16/-. W.A.: Sturmers 13/- to 14/-, Dougherty 14/- to 15/-, Rokewood 13/- to 14/-, Granny 17/- to 18/-, N.Z. (in the "Rangitara" and "Wairangi"): Sturmers 11/3 to 13/-, Dougherty 11/- to 14/9.

Rosebery Spray Outfits.—Attention is drawn to the advertisement in this issue for Rosebery spray outfits. These outfits, which are well known to fruitgrowers in all parts of the Commonwealth, are now distributed by the Wolesley Sheep Shearing Machine Co. of Sydney, as sole agents for the Rosebery Engine Works Ltd. Two of their specials are the orchard spray cart on wheels, with a 2½ h.p. Rosebery vertical hopper-cooled petrol engine, and a separate self-contained power spraying unit for mounting on a sledge or truck. This has a 2 h.p. Rosebery hopper-cooled petrol engine. Further particulars about these outfits may be obtained by writing to P.O. Box 1631 B.B., Sydney.

CAVE'S PURE FRUIT DRINKS.

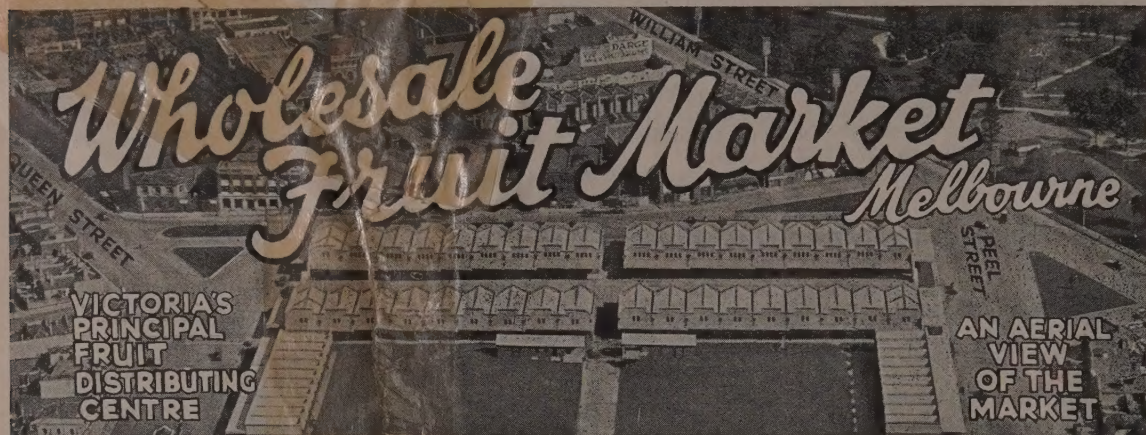
The steadily increasing sale of Cave's Pure Fruit Drinks is a pleasing recognition of the quality of these wholesome beverages.

These drinks are made from pure fruit only: the full flavor is retained: the range now includes Apple, Pear, Peach, Pineapple, Passionfruit, Grape, Orange, Lemon, Grapefruit, and Banana, and the list will be increased soon by the addition of Raspberry, Loganberry and new fruits in season. In addition the company bottles refreshing ginger beer and tonic ale.

Pure Fruit Ice Blocks.

Another enterprise is the supply of a pure fruit base for ice blocks—so beloved of children. The fact that children can obtain full fruit flavored ice blocks, made from pure fruit and not from synthetic compounds, will be appreciated by parents.

Fruitgrowers throughout Australia will appreciate the activity of Cave's Pure Fruit Drinks Pty. Ltd. in rendering this valued service to growers and the public.



Cable Address: DAVIS, MELBOURNE.

Code: "ABC," 4th and 5th Editions.

Box, G.P.O. 148B.

J. DAVIS PTY. LTD., Fruit Merchants

8 WHOLESALE FRUIT MARKET

Consignments solicited.
Telephone, F 3232.

One Trial Invited.

Best Prices obtained.

Prompt Advice and Payment.

Bankers: The National Bank of Australasia, 271 Collins Street, Melbourne.

Silbert, Sharp & Davies
Pty. Ltd.
FRUIT MERCHANTS
17 Wholesale Fruit Market
Phone: F 2287.

G. LISTER PTY. LTD.
WHOLESALE FRUIT SALESMEN
12 Wholesale Fruit Market
Bankers: Commercial Banking Co. of Sydney
For Reference: ASK ANYONE

A. MILLIS & SONS
34 Wholesale Fruit Market
EXPORTERS AND IMPORTERS
Specialty—Prompt Returns. Cheques
every Wednesday. Phone: F 1862

J. W. ROSS
13 Wholesale Fruit Market
WHOLESALE FRUIT MERCHANT
Prompt Returns and Sales Notes Daily.
Tel., F 2426.

G. WOOLF
29-30 Wholesale Fruit Market
WHOLESALE FRUIT MERCHANT
& COMMISSION AGENT
Telephone: F 5550.

BELL, BANSON Pty. Ltd.
Wholesale Fruit Merchants,
20 Wholesale Fruit Market, Melb.
CONSIGNMENTS OF FRUIT AND
VEGETABLES SOLICITED.
Tel.: F1023; Private: JW2528.
Bankers: E.S. & A. Bank,
Market Branch.

T. Stott & Sons

FRUIT MERCHANTS

ESTABLISHED 1832.

26 Wholesale Fruit Market, Melbourne, And at VICTORIA MARKETS.

COUNTRY AND INTERSTATE ORDER TRADE SUPPLIED.

SHIPPING No. 41.
PHONE: F 4370.

PROMPT SETTLEMENTS. CONSIGNMENTS SOLICITED.
Bankers: Bank of Australasia, Melbourne.

F. CAVE & CO.

PTY. LTD.
F. CAVE, Managing Director
Wholesale Fruit Merchants and
Commission Agents.
Exporters of Fresh Fruit.
9 WHOLESALE FRUIT MARKET
Telegrams "CAVECOFRUIT"
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H. LOUEY PANG & CO. PTY. LTD.

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Telegraphic Address: GOOD PRICES ASSURED
"PANGANCO." Cheques Sent Promptly. F 6532.

Tim Young & Co.
Pty. Ltd.

WHOLESALE FRUIT MERCHANTS
18 Wholesale Fruit Market

Growers can be assured of receiving
the very best service and prompt
returns.

Cable Address "TIYOUNG"

A.B.C. Code, 5th Edition.
Box 28a, G.P.O., Melbourne.

TELEPHONE, F 4321

Bankers:

E.S. & A. Bank Ltd.,
Melbourne—225 Swanston Street.

Stencil or Labels on application.

CONSIGN YOUR FRUIT TO

R. A. WING & CO.

Wholesale Fruit and Produce
Commission Agents,
No. 37 Wholesale Fruit Market,
Melbourne.
Branches 141 Little Bourke Street
and Victoria Market.
TELEPHONE: F1744.

CONSIGNMENTS OF FRUIT

AND VEGETABLES

Assured Highest Market Rates.

P. A. PATRIKEOS

36 Wholesale Fruit Market
Melbourne
Telephone: F2227.

H. & S. FRANKEL

(Established 35 Years)

No. 44 WHOLESALE FRUIT
MARKET, MELBOURNE.

Growers in all States are invited to
send consignments. Highest market
rates and prompt settlements.

Telephone: Store F4874;
Bankers. Private F1555 & F8711.

Commonwealth Bank of Australia.
£500 Fidelity Bond Guarantee.

A. E. PITT

Member of Wholesale Fruit
Merchants' Association of Vic.
Established 1893.

14 WHOLESALE FRUIT
MARKET, MELBOURNE.

Consignments Solicited from all
States.

Growers Will Receive Top Market
Value and Prompt Returns.
Fidelity Bond Guarantee for
£1,000.

Reference—E.S. & A. Bank.
Elizabeth St. Branch, Melbourne.
Phone: F 5035.

The Marketing of Bartlett Pears in Western Australia

Regulation of Supplies Under Voluntary System — Co-operation Between Growers and Distributors Stabilises Prices — Relation of Supplies for Export — Prompt Cool Storage After Picking Essential — Importance of Proper Ventilation in Cases — Three-quarter Flat Case Recommended for Local Sales — Substantial Freight Saving Through Bulk Loading.

WESTERN AUSTRALIA is to be congratulated on having developed a highly satisfactory system of marketing cool stored Apples and Pears.

The system is a voluntary one and provides for the co-operation of growers, wholesalers and retailers. The controlling organisation is known as the Apple Sales Board, the constitution of which has previously been described in the "Fruit World." Summed up, the Board is constituted of growers and wholesalers; crops are forecast and quantities apportioned as far as possible for export and local trade; accurate statistics are compiled of fruit in store, including details of varieties and their keeping qualities. Planned quantities are brought forward to market, and advertising is conducted to increase fruit consumption.

The marketing of Pears is described as a subsidiary enterprise.

Success attended the efforts of the Marketing Committee of the Board: the story being told in their report just to hand. Full details are given. Copies of this report are available for those interested.

A summary is as follows:—

Until the marketing was organised the results secured were seldom satisfactory, but during the past few years values have been not only stabilised, but improved.

The increased quantity for local marketing in 1935 was noted with some concern because of overlapping with other fruits, but the quantities were cleared.

After debating certain relevant points, the following recommendations are made:—

1. No Bartletts other than those of really good quality should be stored.
2. No Bartletts under 2½ in. should be stored; the trade and the public do not favor the smaller sizes, and they serve only to depress prices. [All fruit failing to comply with these standards should be marketed ex-orchard.]
3. Some proportion of even the better lines should be marketed ex-orchard.
4. Especially in years of heavy crops, some proportion should be shipped overseas.

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In the 1935 season, many growers picked to date instead of to maturity (maturity was exceptionally late), hence the marketing of immature fruit was difficult, as it did not ripen satisfactorily.

Another difficulty was that lines ex-orchard continued much later than usual and retarded the sale of Pears ex-store. Fortunately, April sales picked up splendidly, and another factor was the late Easter.

Appreciation is expressed for assistance in the regulation of supplies to the market and the confidence reposed by growers in the recommendations of the Committee. Two dangers have to be avoided: (1) break in supplies; (2) a sudden jump in prices—because of public reactions.

Picking and Packing.

Growers are reminded of the special care needed with the picking and storage of Bartletts. The 12-weeks marketing maximum is only

obtainable by cool storage immediately after picking. By leaving for a week without cooling, the storage life is reduced by over a month.

As ample ventilation is necessary, the committee recommends — where Bartletts are stored after packing (as is generally the case).

They should not be wrapped, except where subject to transit immediately after removal from store; in such instances wrapping may (in the absence of re-packing), tend to protect the fruit whilst thawing in transit after the pack has contracted in storage.

Cases should have the boards so spaced as to permit of free ventilation.

Lining paper is essential to prevent case marks (cardboards are not necessary and they hinder ventilation), but it must be so arranged as not to prevent or unduly hinder ventilation. The only purpose of lining paper is to prevent contact between the skins of the Pears and the wood of the case. Two methods may be used.

1. Cut the lining paper short so that whilst protecting the point of contact of the end pieces in each row and the case, it does not reach the end or partition of the case, thus leaving an aperture for ventilation.
2. After packing and nailing up, tear or pierce the lining paper through all apertures of the case boards, taking care not to pull it away from the fruit.

Continuing, the Committee recommends as follows:—

Both in regard to ventilation, and also on other scores, we desire to emphasise our preference for the ¾ flat bushel case for Bartletts. It unquestionably offers better provision

for ventilation than any other type. Furthermore, it is definitely preferred by buyers in respect of Bartlett Pears.

Especially do we condemn the use of the ½ dump case. This is usually tightly built and very badly ventilated. Any advantage it has in a small compartment is secured to a greater extent in a ¾ flat case with its two compartments. The ½ dump will not stack well and is subject to injury in transit on this account. It is so light as to be conveniently capable of being thrown where it ought to be carried.

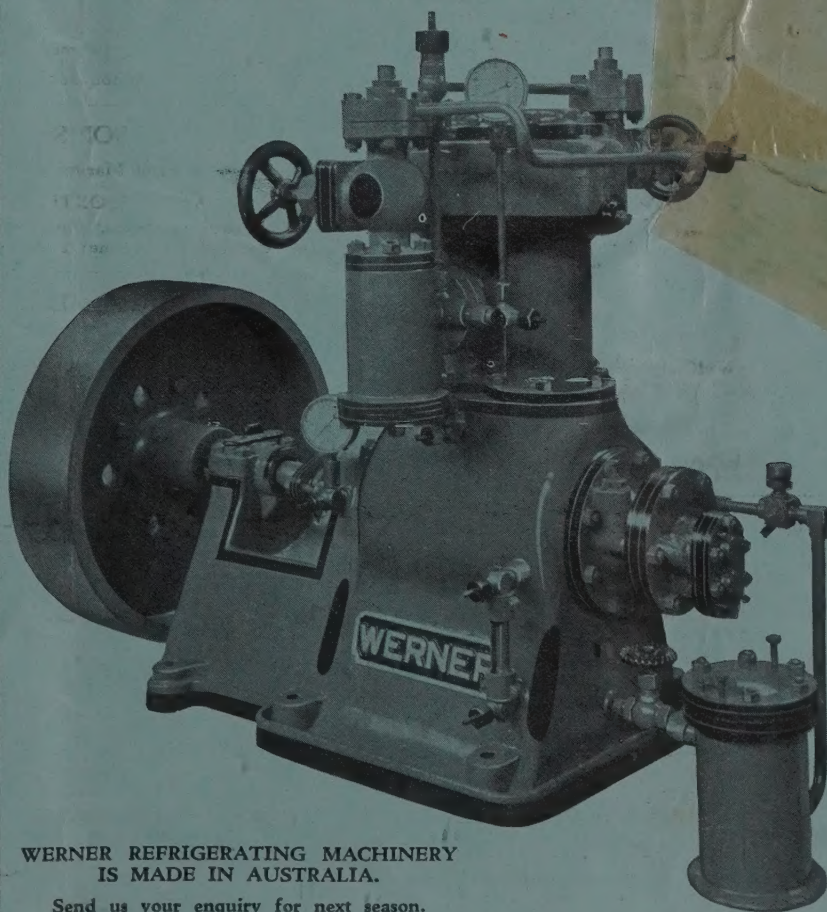
Although the ¾ flat may be more difficult to make up, it is generally conceded that it is more easily packed. The ¾ flat is not only a cheaper container per quantity of fruit, but the relative freight cost is 5 per cent. less.

Last, but not least, our observations suggest very definitely that Bartletts in ½ dumps do not realise prices proportionate to those for ¾

flat cases. It must be understood that the foregoing recommendations are for Bartletts cool-stored for local market and must not be confused with

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THE MARKETING OF BARTLETT PEARS IN WEST AUSTRALIA.

(Continued from page 39.)

the practice for export, in respect of which the conditions differ.

Other Pear Varieties.

A brief reference to other Pears may not be inappropriate. Until last year, late Pears have seldom realised worthwhile average prices. Although better values have obtained recently, this is due only to the limited quantities held for the local market owing to the shipping of a better proportion. The local outlet is very limited, since other varieties cannot be sold in competition with Bartletts and by the time that variety is clear in May unfavorable weather and relative factors have reduced fruit consumption to small proportions. The overseas market should therefore still be looked to as the outlet for late Pears.

As with our other activities, it has been carried out at no cost to growers, and an incidental feature is the substantial freight savings secured through the bulk trucking of quantities held in the Bridgetown store.

For the Marketing Committee of the Apple Sales Board,

H. W. SOOTHILL, Hon. Sec.

WET CONDITIONS IN THE ORCHARD.

And the Consequent Increased Need for Nitrogen.

THIS COMING SPRING is most likely to be one demanding the purchase and application of such a nitrogenous fertiliser as sulphate of ammonia. Nothing can so seriously affect a crop as a shortage of nitrogen in the spring and nothing can so surely prevent such an undesirable event as a good dressing of this fertiliser.

For most orchard districts in Victoria, all in fact except those in the north-west, this winter has proved one of the wettest on record. For deciduous trees, much as one is reluctant to admit it, that is on the whole an undesirable circumstance. Overmuch rain causes wet, boggy and, in some cases, water-logged soils. It makes work in the dormant period — spraying, pruning, etc. — most unpleasant, to say the least. But it brings other troubles, often less appreciated, in its train. These are the results of soil water accumulation on the one hand and washing out of plant foods on the other. The former is due to poor drainage, whilst the latter is most evident in a well drained soil. The soil which is probably least affected is that which carries the heaviest growth of vegetative matter, cover growth. This, on account of what is called the transpiration of water through the leaves of these plants, helps to get rid of excess.

Soil Water accumulation

in the winter and early spring, as well as having an adverse effect upon root development, causes also a depletion of the available nitrogen in the soil. It is this shortage of nitrogen which produces yellowing of the leaves of plants, so well known to cereal growers during a wet, cold winter. Any orchardist may observe it also in the appearance of non-leguminous vegetation amongst his trees. Such a shortage, when caused by cold and wet conditions, is due to the fact that the nitrate form of nitrogen existing in the soil as a result of cultivation or applications of fertiliser during the previous year is washed down to levels below the root zone. The supply of available nitrogen in any soil is governed to a great extent by the activity of living micro organisms. Some of these are favored by water logged soils, others by the supply of more air. The former type destroy available nitrogen, the latter create it

COOL STORAGE

Development of Cool Stores at Canneries

A REVIEW OF THE OPERATIONS OF R. WERNER & CO. PTY. LTD.

THE adjunct of cool storage some years ago has probably been one of the biggest factors in assisting the fruitgrower and spreading the period of marketing, particularly Apples and Pears, over a longer period. The recent decision to limit exports from Australia creates still greater necessity for further development in building cool stores. Cool storage enables growers to regulate the distribution of their fruit sales, particularly in regard to interstate markets.

Recent years have seen a new development for cool stores, particularly for pre-cooling Pears and Peaches. Canneries have found that Pears and Peaches after being placed in cool store ripen evenly, thus allowing the work of canning to proceed smoothly. The system used in these pre-cooling plants is a new one to fruit storage and comprises a combination of direct expansion and air circulation by means of a fan with ducts and blinds individual to each chamber, and is based on quick moving air through the stacks of cases.

The following figures give some indication of the development in the erection of cool stores adjacent to canneries, and they have now become a necessary part of cannery equipment. Leeton and Griffith in the Murrumbidgee areas have stores capable of holding 30,000 and 20,000 cases respectively, equipped with heavy duty pre-cooling plants, Australasian Jam Co., 50,000 cases, Shepparton Cannery 100,000 (plans are now being made to add a further two chambers here, bringing the capacity up to 120,000); Kyabram Cannery are now erecting a cool store with a 35,000 case capacity which will be in operation this year.

System of Refrigeration.

Scientific research has developed a new direct expansion method of refrigeration and it is generally agreed that this system as far as the storage of Apples and Pears is concerned, is a vast improvement on the old air circulation system, and icing-up troubles have been eliminated.

It has been found that the direct expansion system improved the quality of the fruit stored, especially those cases taken out of the store towards the end of the year. In addition, running costs are definitely less than on the older air system. This

from organic matter, as well as from the air. Therefore, in a badly drained soil under wet conditions, organic matter remains undecomposed in the spring, e.g., as in the case of peat swamps, and little or no nitrogen is fixed from the air, whilst any available nitrogen that does exist is locked up or dissipated in other ways.

In a

poorly drained orchard

soil during a particularly wet winter, the very drastic step of having to get rid of the surplus water before the spring burst may become the only alternative to losing some of the trees due to root trouble. But regardless of whether drainage is bad or good, a shortage of available nitrogen may be anticipated, and the only remedy then lies in its artificial application.

A BIG FACTOR IN DEVELOPING THE FRUIT INDUSTRY

Stabilising Effect of Spreading Sales

Cool Stores on Individual Orchards

particularly applies to those stores which are driven by electric motors. Engineers who staunchly stood by their battery system for years have been converted to direct expansion, and it seems only a matter of time when all stores will be changed over to this system.

In many cases where Messrs. R. Werner & Co. Pty. Ltd. have been instructed to change over the system of refrigeration they have been able to take in the battery room as a store, either as a separate room or to widen the adjacent chamber. The extra income derived from the change because of the space so created in one instance amounted to over £100 per annum, which paid, at 10%, the interest on the whole conversion job. The new system of direct expansion can also use up old battery coils if there is any reasonable expectation of life in them. A conservative estimate places the cost of conversion to direct expansion at approximately 9d. per case. In some cases it is less than this amount if the old battery coils can be used.

Cool Stores on the Orchard.

With the development of the fruit industry many growers have found it difficult to obtain all the space required in the big district stores, and this has resulted in the development of cool stores on the individual property. These orchard cool stores range from a capacity of 1,000 to 15,000 cases. Owners of individual stores have proved the value of same, and in addition to affecting savings in their costs they have saved time in carting the fruit from their orchard to the district store and have been able to devote this time to other necessary work on the

orchard. The following experience of a private orchardist who recently erected a store on his property is of interest. A store with an 11,000 case capacity was built costing approximately £2,400. This was built from the best materials throughout with crude oil engine drive, refrigerating plant and electric lighting unit for the store and the home. After allowing for interest, depreciation, maintenance, all upkeep and running expenses on a very liberal scale, it cost approximately only 8d. per case per year. This was after allowing for the building to be written off over a period of twenty years and the plant in ten years. It is, of course, well known that if the store is a good job that it will still be doing good service for another twenty years after the period that it has been written off. The actual cost for fuel and lubricating oils is about 1½d. per case per year. These figures are based on the store capacity of 11,000 cases, whereas if more fruit is put through the store the cost per case would be reduced.

With regard to these small cool stores on the orchard it is interesting to know that small stores from 5,000 to 10,000-case capacity can be built and equipped for an all-round figure of 5/- to 6/- per case, or even less in larger sizes. A definite estimate for a store ranging from 3,000 cases upwards will be willingly submitted by Messrs. R. Werner & Co. on request. This firm will have their usual interesting exhibit at the corner of McCracken Avenue and Lobb Street, at the Melbourne Royal Show, to be held from September 19 to 28, and will be pleased to meet growers and discuss their cool storage problems.



6,000 Case Fruit Store.

Sulphate of ammonia is best applied in balance with super and potash, in such mixtures as the 2:2:1, the 4:4:1, or, without potash if so desired, in 1 & 1 super and ammonia. This latter mixture consists of equal parts of superphosphate and sulphate of ammonia. Failing that, at least a little "straight" sulphate of ammonia is strongly recommended. Now is the time to apply it. Two or three lbs. per tree at least is recommended, and it should be spread around the tree and, preferably, plowed under. Failure to appreciate the need for the application of some available nitrogen in a wet spring, such as the present one, to fruit trees, may result in the loss of far more than the cost of the fertiliser due to the shortage or failure of subsequent crops.

HOW CALIFORNIA COMBATS FROST.

Frost Warnings and Wind Machines.

The following two clippings are taken from Californian exchanges:— Local frost warnings are broadcast over Station KFSD, San Diego, at 7 p.m.

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Several citrus growers in the Ivanhoe district, Tulare county, have installed wind machines to protect their groves against frost.

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Later information re the wind machines will be awaited with interest. As pointed out in the "frost prevention" articles in the "Fruit World," it is only on the still nights that frosts can occur, hence the innovation of creating air currents.